

D

Rose J. H.
+ Agave notes
Journal Mexico 1899

Held for 1893 journal
now - Jan 9
~~1893~~

Itinerary Ecuador
1898

Rose's Grand fine notes

E.P.K. AUG 4 1938

~~Dr. Maxam~~

17

Plants from Dr. Rose of which names are desired for proper labelling as follows:

- | | | |
|---------|---|-------------------------------------|
| 04.124 | ^{MN}
<i>Apuntia macrodactyls</i> | Mexico, Dr. E. Palmer. |
| 04.606 | <i>Echeveria gibbiflora</i> | ample greenhouse plant. |
| 04.606 | " | " |
| 05.F | | |
| 05.52 | <i>Echinocactus</i> sp. | Insoron, Arizona, by W. T. Swingle. |
| 05.475 | <i>Echinocactus</i> | Mexico - Dr. E. Palmer, 1905- |
| 05.447 | " | " " |
| 05.517 | <i>Sedum</i> | " " |
| 05.763 | <i>Sedastrium glabrum</i> Rose | " " |
| 05.678 | <i>Cactus</i> | Texas - by J. H. Gant, " |
| 05.729 | <i>Lophophora</i>
<i>Lamprophyllum williamsii</i> | Mexico - Dr. E. Palmer " |
| 05.836 | <i>Sedum stahlii</i> | " from Mo. Bot. Garden " |
| 05.835 | " | " " " " " |
| 05.1168 | " | " by J. N. Rose |
| 05.1237 | <i>Echeveria</i> sp. | " " " |
| 05.1247 | <i>Echinocactus</i> sp. | " J. N. Rose 1905- |
| 05.1357 | <i>Mamillaria</i> " | " " " |
| 06.22 | <i>Sempervivum tabulaeforme</i> | Canary Islands - 1904. |
| 06.1 | <i>Sedum</i> sp. | " C. A. Purpus. |
| 06.46 | <i>Sudleya farinosa</i> B. + R. | California - 1906. |
| 06.135 | <i>Cereus coccinea</i> | Guatemala, H. Pithier. |
| 06.185 | <i>Sedastrium hemsleyanum</i> , | Mexico. C. Conzatti, 1906. |
| 06.246 | <i>Sudleya</i> sp. | from California - A. Eastwood |
| 06.281 | <i>Talinum</i> | " Mexico - E. Palmer. |

over

List of Dr. Rose's numbers at J.H.M.

(2)
1906.

- 06.357 *Echeveria carnicolor* Baker - Mexico, C. A. Purpus
06.188 " *nodulosa* Att. from Mexico, C. Conzatti.
07.99 *Pilocereus palmeri* Mexico, Dr. E. Palmer 1907.
07.111 *Mamillaria pumilla?* " " "
07.138 *Opuntia* sp. Guatemala - W. E. Safford -
07.104 *Echinocactus hamatocanthus* Muhlenb. Mexico, Dr. E. Palmer '07.
07.411 *Dudleya pulverulenta* - California - V. Bailey - 1907.
07.491 *Cereus* - sp. Cuba - C. F. Baker "
07.492 *Mamillaria heyderi* - Texas - F. L. Lenton "
07.481 *Sedum* sp Mexico - C. A. Purpus "
07.468 *Echeveria* sp. " " "
07.467 " " " " "
07.510 " " from Louisiana by Chris Jacobs - "
08.84 *Echinocactus* sp - Mexico by Dr. E. Palmer "
08.112 *Mamillaria grahami*, Arizona J. N. Rose, 1908
08.1089 *Opuntia* sp - Tucson, Arizona - J. N. Rose 1908
08.1111 *Cereus* " " " "
08.1177 *Opuntia* " " " "

Supplementary

- 05.804 *Calibanus caespitosa* Rose - Mexico, C. A. Purpus - 1905
06.92 *Agave decipiens* - Florida - J. H. Egbert, 1906
06.249 " *Amole* " Guatemala - O. T. Cook "
06.338 *Agave* sp. New Mexico - V. Bailey "
06.1218 *Beschorneria* sp. California - J. N. Rose - 1908.
07.132 *Bromelia* " E. W. Safford -
08.167 *Beaucarnea guatemalensis* - Guatemala, W. H. Kellerman -
08.1041 *Dasyllirion* sp. Mexico - J. N. Rose -

List of plant numbers from Dr. Rose (or S. & P. J.) (without date number)

9	Echinocactus	Chihuahua, Mex., J. N. Rose - 1899.				
87	Echeveria pubescens	Mar Tepic, " - " - " - " - "				
242	?					
316	Echeveria racemosa	Jalapa, Mex. " " " "				
491	Sedum leibergeri	Washington, Oct. 1902				
386	Sedum ?	Los Angeles, Cal. Dr. Hasse, 1902				
499	?	Mexico, Dr. Palmer - "				
448	Urbinia corderoia	Rose - San Luis Potosi Mex. - Dr. Palmer "				
504	Agave	R. E. Kunze, Phoenix, Ariz. "				
509	Echeveria cuspidata	Rose, Saltillo, Mex. @ R. Arcut. 1903				
558	Dudleya cultata	Rose. San Quintin Bay, Lower Cal. "				
604	Echeveria	Mexico - C. A. Purpus 1903.				
628	Echeveria multicaulis	Rose - " - E. W. Nelson "				
653	Echeveria scopulorum	Rose. " E. A. Goldman "				
704	Echeveria	" J. N. Rose "				
735	Sedum moranum?	" " " " "				
737	Echeveria elegans	Rose " " " " "				
766	Sedum palmeri	" C. G. Pringle "				
768	Lenophyllum acutifolium	Rose, Mex. " "				
779	Echeveria secunda	" J. N. Rose "				
835	Echeveria secunda	" " " " "				
838	Cremnophila nutans	Rose. " " " " "				
850	Axalis	" " " " "				
859	Echeveria pringlei	Rose " " " " "				
870	Echeveria	" " " " "				
903	Echeveria	" " " " "				forever

see 9441

Numbers without date number

930	<i>Echeveria rubromarginala</i> Rose	- Mex. C. A. Purpus - 1903
938	<i>Echeveria</i>	" " "
924	<i>Lenophyllum weinbergii</i> Britton	" J. A. McDowell -
937	<i>Courantia</i> sp -	" C. A. Purpus - 1904
938	<i>Echeveria</i>	" " " " 1904
see 939	<i>Echeveria</i>	" " " " 1904
945	<i>Echeveria purpusii</i>	" " " " "
1005	<i>Echeveria goldmani</i> Rose	, Mex. E. A. Goldman - "
1012	<i>Echeveria sessiliflora</i>	" " " " "
1014	<i>Echeveria nuda</i> Lindl.	" F. N. Meyer - "
11027		
11037	<i>Agave megalacantha</i>	" C. G. Pringle - 1902
11048	<i>Echeveria coccinea</i> D. C.	" " 1904
11027	<i>Lenophyllum pusillum</i> Rose	" (Cult.) Frank Weinberg,
11036	<i>Echeveria pumila</i> Van Hook	- (Cult. Depart. Parks, N. Y. City.
11061	<i>Echeveria obtusifolia</i> Rose	- Mexico - C. G. Pringle, 1904
19243		
10180	<i>Polygala</i> ?	" J. N. Rose - 1905
10175	<i>Pelecyphora</i> ?	" " "
18057	?	
18673	?	
19243	?	
30770	<i>Opuntia</i>	Mexico - D. Griffiths, 1904
30771	"	Texas, J. M. Ferguson, 1904
30772	"	Texas, J. M. Ferguson, 1904
30780	<i>Opuntia</i>	
30767	<i>Opuntia</i>	Mexico - Dr. E. Palmer 1902
30794	"	" E. Stearns,
30786	"	" E. Palmer, 1902
30789	"	" " "
30771	"	Texas - J. M. Ferguson, 1904
30785	"	Mexico - Dr. E. Palmer, 1902
30787	"	" " "
30793	30799 + 30803 - see other page (a)	

List of numbers on plants from Dr. Rose. 13
(without indication of date of collection):

859	Agave vestita	Mexico, J. N. Rose,
779	(?)	
924	Lenophyllum weinbergii	Mexico - J. A. McDowell,
930	Echeveria submarginata	Rose, " C. A. Purpus 1903
937	Courantia	" " "
938	Echeveria	" " "
939	"	" " "
945	" purpusi	Rose - " " "
1005	" goldmani	Rose - " E. A. Goldman - 1904
1012	" sessiliflora	Rose - " " "
1014	" nuda	Lindl. " F. M. Meyer - 1904
11027	Lenophyllum pusillum	Rose " Cult. by F. Weinberg,
11036	Echeveria pumila	- Cult. in N. Y. City - sent by Dr. Griffith
11048	" coccinea	- Mexico. C. S. Poiringer 1904.
11061	Echeveria obtusifolia	Rose - " " "
10180	?	
10175	?	
18857	?	
15243	?	
30770	Opuntia	Mexico, D. Griffiths, 1904
30771	"	Texas, J. M. Ferguson "
30772	"	" " " " "
30767	Opuntia	Mexico. Dr. E. Palmer "
30780	"	
30785	"	Mexico. Dr. E. Palmer, 1902
30786	"	" " "

over

(a)

List of undated plant numbers from Dr. Rose

14

30787

Opuntia

Mexico.

Dr. E. Palmer ¹⁹⁰²

30789

"

"

"

"

30793

"

"

Elmer Stearns

30794

"

"

"

"

30799

"

Texas - F. L. Lewton

30803

" tuna

California - H. E. Hasse.

0120

ITINERARY OF J. N. ROSE AND GEORGE ROSE IN ECUADOR, 1918.

August 9 to 12	Guayaquil and vicinity
August 12	En route from Guayaquil to Huigra
August 12 to November 5	Headquarters at Huigra
August 14	En route from Huigra to Guayaquil
August 14 to 16	Guayaquil and vicinity.
August 16	En route from Guayaquil to Huigra
August 23, 24	En route from Huigra to Ambato
August 24 to 26	Ambato and vicinity
August 26, 27	En route from Ambato to Huigra
August 30	En route from Huigra to Guayaquil
August 30 to September 2	Guayaquil and vicinity
September 2	En route from Guayaquil to Huigra
September 14	En route from Huigra to Santa Rosa
September 15	En route from Santa Rosa to Cañar
September 16	En route from Cañar to Azogues
September 17	En route from Azogues to Cuenca
September 17 to 24	Cuenca and vicinity
September 25	En route from Cuenca to Nabon
September 26	En route from Nabon to Tablon de Oña
September 27	En route from Tablon de Oña to Zaragura
September 28	En route from Zaragura to Las Juntas
September 29	En route from Las Juntas to Loja
September 29 to October 3	Loja and vicinity

ITINERARY OF J. N. ROSE AND GEORGE ROSE IN ECUADOR, 1918.

-2-

October 3 to 6	En route from Loja to Portovelo
October 6 to 15	Portovelo and vicinity
October 15	En route from Portovelo to Ayapamba
October 16	En route from Ayapamba to La Chonta
October 17	En route from La Chonta to Santa Rosa
October 17, 18	Santa Rosa and vicinity
October 18 to 19	En route from Santa Rosa to Guayaquil
October 19 to 21	Guayaquil and vicinity
October 21	En route from Guayaquil to Huigra
October 23	En route (on foot) from Huigra to Ventura
October 25, 26	En route from Huigra to Quito
October 26 to November 1	Quito and vicinity
October 29	San Antonio and Pomasqui and vicinity
November 1 to 7	En route from Quito to Duran
November 7 to 9	Duran and vicinity
November 10	At anchor off coast of Manta
November 9 to 15	En route from Guayaquil to Colon
November 15 to 24	Colon
November 27	Port au Prince, Hayti
November 24 to December 3	En route from Colon to New York
December 4	Washington D. C.

04. 396

H. Pittier

Atlantic Plains,
Zent, Costa Rica.

Weberocereus Biolleyi

Stem and an immature flower.

04. 532

Dr. E. Palmer.

Mexico.

Opuntia

Flower 6 cm. long, spreading to 4.5 cm. in diam.; calyx tube glaucous, bluish green, 2.5 cm. long, 2.1 cm. in greatest diam., (at the top), bearing a few areoles filled with brown glochids and 1 or 2 ^{brown} spines; areoles subtended ^{by} reddish or brownish bract; at top of calyx tube is a ring of areoles, the bracts from which are longer, turgid, greenish at bases and reddish at points; sepals greenish, grading ^{and lengthening} into yellow petals, broad, pointed; petals sulphur yellow, spatulate; stamens pale yellowish green, attached all over broad shallow throat, decidedly "irritable"; anthers lemon yellow; style creamy white, 5 mm. in diam. at base, 3 mm. at top, 2.5 cm. long, including stigma; stigma lobes

~~4th (O. L. o. L. x~~

lemon yellow tinged with green,
6, 5 mm. long, turgid, folding together to
make a globose stigma; ovary 1 cm. long,
5 cm. in diam., at top, tapering nearly to a
point at bottom.

04.1013

Cereus Macdonaldae

Flowering May 8, 1912; stems dark green, 2 cm. or less in diameter, large ones somewhat strongly ribbed and tubercled; ribs 6; areoles on upper part of tubercles bearing 3 to 5 spines, short, sharp and strong, 1 to 2 mm. long; buds covered with dark brown hairs; long aerial roots to aid in climbing; flowers nocturnal, still somewhat open at 9.00 a. m., 35 cm. long; calyx tube 20 cm. long, 1.5 to 4 cm. in diameter; bracts entirely covering ovary, with areoles, in 13 spiral rows turning to the right; areoles on tube above bearing 5 spiral rows of areoles with bracts, also turning to the right, these supported by pillar-like projections; bracts green longer on upper part of tube and changing to purple with red tips with purplish tips; areoles bearing about 20 brown bristles 5 mm. or less long and brown hairs, all pointing upwards; sepals, outer ones yellowish red, inner ones yellow, 15 cm. long, 6.5 mm. wide, oblong linear to acuminate; ovary oblong oval, 6.5 mm. in diameter, 1.5 cm. long, having parietal

pure 2
placenta; tube proper 4 cm. long; throat 14 cm. long; petals white, spatu-
late, same length as sepals; stamens of varying length, light pale green;
anthers light yellow, clustered around pistil; ^{style} ~~pistil~~ 26 cm. long, creamy
22, 2 to 2.5 cm. long, umbraculiform,
white, 4 mm. in diameter; stigma lobes greenish yellow.

Greenhouse, U. S. Dept. Agriculture, in 1904.

05.846 Cereus Macdonaldae; flowering May 11, 1912.

Noted differences from 04.1013: Calyx tube 17.5 cm. long; sepals 16
cm. long, 1 cm. or less wide; petals not quite as long; tube proper 5 cm.
long, throat 10 cm. long; style 26 cm. long, exsert beyond stamens 2 cm.
; stigma lobes 22, puberulent, light lemon yellow; flower 32.5 cm. long.

From Botanical Garden.

04. 1022

Mr. Traile's plant.

Cereus peruvianus

3-27-15

04. 1022.

Cereus peruvianus Mr. Fraile's plant.

O.H. 1039

B. Meyer.

Ny B. J. No. 9314.

Cereus Cavendishii

Flower 11 cm. long; calyx tube, including ovary, 7.7 cm. long, 8 mm. to 16 mm. in diam., bright green at base, pale green with pinkish tinge above; areoles on tube slightly raised, completely encased in ~~a~~ broad closely appressed bracts with red mucronate tips; sepals broad, mucronately tipped, pinkish, the margins thin, slightly serrate, lighter colored; petals thin, whitish with faint greenish tinge, lanceolate acuminate, slightly exsert beyond sepals; stamens white, frail, attached over all upper third of tube; anthers 1.5 mm. long, flat, brownish yellow.

(over) 8 - 4 - 15.

style, including stigma, 9 cm. long, 1.6 mm.
in diam., white; stigma lobes 11 mm. long,
linear, 13, nearly white; ovary cylindrical,
8 mm. long, 6 mm. in diam., truncate at
top.

05. [000.]

Mexico.

Flower 5 cm. long, with spread of about 4 cm., the ^{dark green} embryo fruit 2 cm. long, 18 mm. in diam., and covered with small areoles; areoles full of brown glochids, the upper areoles sometimes having ^{to 4} ~~1 or 2~~ small brown spines 5 mm. long and less; sepals shorter ones dark Indian red on outside, Bordeaux colored on inside, larger ones as the petals, dark rose color, oblanceolate to spatulate, usually mucronately tipped; ~~stigma and~~ style and stamens included, the style darker than filaments and petals, exsert about 5 mm. beyond stamens, ^{and less} ~~and less~~ 3.5 mm. ~~in~~ ⁱⁿ diam.; 2 cm. long; stigma lobes 7, 3.5 mm. long, slightly lighter colored than petals; ~~anthers~~ filaments attached all over wide shallow throat, numerous anthers light yellow; ovary small, globose, truncate; joints ^{thin,} light green, elongate obovate, the numerous areoles having 2 to 4 spines from upper parts, of these yellowish ~~flexed~~ pointing downwards, 2.5 cm long and less.

~~Torebinthus bipinnata (DC.) W. F. Wight. Contr.~~

Nat. Herb. 10: 119. 1906.

See ~~Amyris bipinnata, etc.~~

over

O 5. 82.

Coult's tongue.

W. T. S.

Cactus Garden,
Eastlake Park, L. A.

Opuntia monacantha

See description: Areoles ^{of flower on slight} filled with whitish very short wool, and occasionally bearing 2 to 4 short brown spines, or bristles, subtended by short reddish bracts; sepals broadly spatulate, outer ones deep red, inner ones grading into yellow petals; corolla tube about 4 cm. long, 18 mm and less in diam., funnel form, slightly curved; ovary elongated ellipsoid, 9 mm. long.

enlargement

05.100

W. J. S. 227.

Cactus Gardens, L. A.
12/28/04.

Cereus

Flower 32 cm. long (See flower & description made 6-29-14). This flower seems same except larger. ^{Petals white,} ~~Sepals~~ ob lanceolate, mucronately tipped; sepals light to yellowish green, somewhat scale-like, linear apiculate, some having brown tips; filaments same color as style, cream colored; stigma lobes 2.8 cm. long, lemon yellow, 28, linear; ovary ellipsoid, 1.8 cm. long, 8 mm. in diam.

05. 100 Cereus from Cactus Gardens, Los Angeles.

Plant 3 angled, ^{having aerial roots} with one flat side, 1 rib arising perpendicularly from center, dark green, new growth darker, both parts darker near margins with brownish ~~on~~ edge. margins serrated, areoles at distant about 2 cm.

Flower about 25 cm long; stem ¹⁴ ~~12~~ cm. long, ~~2.5~~ 2.5 to 5 cm. in diam.; bracts at bottom quickly enlarging into broad, ~~thick~~ thick sepals and these grading into the ~~lighter~~ ^{white} ~~colored green~~ petals, ^{the sepals having} with ~~brownish~~ apiculate tips; ovary ovoid 1.3 cm. long, filled with ovules; style 5 mm. in diam. ^{20.5} ~~18.5~~ cm. long, ^{light} cream colored; stigma lobes lemon yellow, large, numerous, ^{2.4} ~~2.5~~ cm. long; filaments whitish, arising from nearly to bottom of tube, numerous; anthers gamboge yellow

05. 239.

Selenicereus

[Erroneously marked doubtful, as this no. is *Cactus Maxoni*.]

6 - 8 - 15.

05.307

Fruit about 3 cm. long, 1 cm. in greatest
diam., bright red, sharply pointed, point long
drawn out; dried perianth firmly attached; ~~pith~~
pulp nearly white, juicy; seeds 1.5 mm. long,
black.

05.311.

W R Maxon. #3767.

Cereus

El Rancho, Guatemala.

Seems same as 09.197

Nyctocereus guatemalensis Britton & Rose.
Cereus hirschiianus

Flower some smaller; stigma
lobes 8 instead of 6.

7-2-14

05. 317

W B Maxon

Opuntia ^{de}~~procumbens~~

El Rancho,
Guatemala.

Fruit 3 mm. long, 2 mm. in greatest diam., pointed at base, truncate at top, ~~into~~ the center of top deeply depressed (8 mm.), slightly glaucous, purple madder, with darker blotches around areoles; areoles numerous, 1 cm. and less distant, round, full of short dirty white wool and brownish yellow glochids; pulp a very juicy, ^{dark} purplish, almost tasteless substance; seeds, somewhat flattened making a roughly circular rim 4 mm. in diam., the seed being 2 mm thick through center and less near the rim, of a dark reddish color, darker at center.

7-28-15.

05.317

W. R. Maxon

Guatemala
El Rancho.

Opuntia decumbens

See other card.

05.342 Echinocactus setispinus Engelm.

Flowering June 3, 1912; stem cylindrical, bending to one side, almost reclining, 24 cm. long, 7 to 8 cm. in diameter, somewhat truncate; ribs 13 and 14, spiral to the right, making one-fourth turn, 1 to 1.5 cm. high, near light terre verte, as given in Winsor and Newton's Artists' Oil Colors, with greenish gray colored crests; crests 13 to 20 mm. apart, and bearing areoles at intervals of about 1 cm., where slightly enlarged; areoles bearing spines, radials 7 to 13, 12 to 15 mm. long, varying in color from reddish brown to dull white; central 1, about 3 cm. long, slightly stouter than radials, and having slight curve at tip, ^{also reddish brown save} tip usually darker though sometimes lighter; areoles also bearing small amount of wool, dirty gray in color but on newer growth lighter to light buff in color; flowers from top center, 5.7 cm. long, spreading about 5 cm.; calyx tube 2.7 cm. long, 15 and 5 mm. in diameter at top and bottom respectively,
Fitch.

2

light willow green at bottom and becoming lighter at top, bearing small bracts of same color save for brownish tips and whitish margins; bracts grading into sepals still lighter, with pinkish tints, and these grading into petals creamy white at base with pink upper parts; sepals and petals both oblanceolate, the latter being acuminate; ovary long oval, 2.5 mm. in greatest diameter, and 5.5 mm. long; tube proper 3.5 mm. long; throat narrow, 1.5 cm. long, 1 cm. wide at base; stamens attached full length of throat, numerous; filaments slightly darker than the pink in petals, becoming lighter at the top; anthers dirty greenish yellow, small; pistil exsert beyond stamens, ~~xxxxxxxlongx~~ style creamy white; 3.3 cm. long; stigma lobes 6 and 8, aureolin colored, as given in Winsor and Newton's Water Colors.

Collected by F. L. Lewton April 14, 1905, under mesquite bushes "down Rio Grande", 7 miles east of Brownsville, Texas.

05.363

Echinocactus myriostigma S.+D.

Flowered April 30, 1912; flower 3.5 cm. long, about 1.5 cm. in diameter; petals numerous, oblong elliptical, jagged, glistening creamy white on inside, same on outside save for narrow purple stripe at center; bracts acuminate, pinkish to dark purple, bearing wool; stamens numerous, outer ones attached higher up throat and standing higher; filaments white, weak; anthers golden yellow with abundant pollen; pistil longer than stamens, separated into 7 green stigma lobes, about 6 mm. long, puberulent; ovary globular, circular, 2 to 3 mm. deep; no tube proper; throat funnel shaped, 1.5 cm. long and 1 cm. wide at top.

Plant collected in northern Mexico by C. A. Purpus in 1905.

Fitch.

05.386. ? [Probably 05.388.]

Echinocereus according to records.

Really a Stapelia. Look up.

05. 414

Dr. C. A. Purpus

Parras, Mexico.

Echinocactus

Flower 9 cm. long, spreading 5 to 6 cm.; calyx tube, including ovary, 4 cm. long, 1.2 to 2.5 cm. in diam.; ^{bright green, spinel pink above} numerous areoles bearing ^{light} gray wool and subtended by dark brown apiculate bracts 1 cm. long; sepals primrose yellow except for pinkish ^{center} streak ~~near~~ ^{at tip}. and brown apiculate tip; petals primrose yellow, oblanceolate to spatulate; stamens numerous, same color as petals, attached all over deep funnelform throat; anthers lemon chrome [R]; style about 3 cm. long, 2.5 mm. in diam., yellowish white; stigma lobes 7, 7 mm. long, probably about same color as style before pollenized; ovary ellipsoid, 1 cm. ~~long~~ long, 4 mm. in diam.

05. 414.

C. A. Purpus,

Paras, Mex.

Echinocactus

Flower 7 cm. long, spreading 5 to 6 cm.; calyx tube, including ovary, 3 cm. long, 1 to 2.3 cm. in diam., covered with grayish wool and dark brown, apiculate bracts; bracts grading quickly into petals, these spatulate, apiculate, mucronately tipped, Martius yellow, except at base Nopal red, a beautiful contrast; stamens numerous, attached all over funnelform throat; anthers golden yellow; style included, but exserted beyond stamens 4 cm., yellowish white; stigma lobes 5, linear, spreading, 8 mm. long, ^{pale} lemon yellow; ovary cylindrical, 7 mm. long, 4 mm. in diam.

8-6-14.

05.503

Mamillaria

B. G. 6.

Plant flowered March 5, 1912, and again in April; 6.25 cm. high, 5.5 cm. in diameter, terete, tapering slightly downward, truncate; tubercles arranged in ¹⁰ spiral rows, 4-angled at base, rounding at top, especially in newer growth, on sides of stem, diamond-shaped, about 12 mm. long horizontally, 4 to 7 mm. wide vertically, measured from apexes of angles, while on top of stem tubercles longer towards center; newer growths dark green stone to light brownish and russet colored at sides; axils usually bearing abundance of white wool; areoles bearing small amount of grayish wool on newer growth, also bearing spines, 7 to 9, whitish with dark brown to nearly black tips, from 2 mm. to 4 cm. long, this latter of older spines, there usually being one long one, 2 or 3 shorter ones, and 4 or 5 ^{tending downward} 2 to 3 mm. long, longest spine on newer growths usually about 1.5 cm. long; not definitely divided into radials and centrals; flower very sessile, 1

Fitch.

cm. long, 7 mm. in diameter; petals 10 to 12, royal purple, oblanceolate;
clustered round pistil

stamens numerous; filaments same color as petals; anthers dirty white;

pistil nearly as high as petals, exsert beyond stamens about 3 mm., ~~also~~

at top, creamy white below
purple; stigma lobes 5, purple tinged with yellow.

O 5. 6 6 2

Dr. E. Palmer

Selenicereus

San Dieguito, S. L. Potosí.

Flower 25.5 cm. long; calyx tube, including ovary 16 cm. long, 1.2 to 4 cm. in diam.; light green with tinges of pink; ovary covered with protuberant areoles bearing small narrow reddish bracts, white wool and hairs; areoles on tube in clockwise spirals, the small bracts and scarcity of hairs almost leaving the tube naked; sepals scale-like, linear, brown, the inner ones grading to yellow; petals white, oblanceolate to spatulate; filaments numerous, pale green, attached in ring at top of tube and then from 3 cm. below to almost the bottom of the tube; style pale green, becoming yellowish at top 2.5 mm. in diam.; stigmas lobes about 20, 15 cm. long, yellow; ovary ovoid, 8 mm. deep, truncate.

05. 663

Dr. Ed. Palmer,
San Luis Potosí.
"Pitahaya."

Cereus triangularis

Seems identical with 05. 100, save
that stigma lobes are pale green instead
of lemon yellow.

6-29-14. W.R.F.

05. 752.

Opuntia.

Dr. Edw Palmer, near

Saltillo, Mex. July, 1905.

7.5- Flower ^{7.5} cm long, opening with spread of 5 to
7.5 cm. in diam. Stem ^{bluish} ~~dark~~ green, glaucous, bearing
short dark brown glochids and brownish bracts.

Sepals greenish quickly ~~then~~ grading into more
numerous, pale lemon yellow petals: petals
cuneiform, except somewhat dentate at top.

Style 1.5 to ^{2.4} mm. in diam., ^{2.4} cm. long, creamy white:
stigma lobes 6, green, ³ mm. long: ovary ^{1.2} cm. long,
^{1.7} mm. in diam.; anthers gamboge yellow; filaments
numerous, pale green.

05.808

Echinocereus

Flowering May 14, 1912; stem globose, 7.5 cm. high, 7 cm. in diameter, leaning to one side, covered with scarious grayish to brownish skin except ribs low, somewhat broken by rather low tubercles; on newer part where under skin of green to russet and brown appears; areoles 4 to 8 mm. apart, about 4 mm. long, bearing spines, radials 12 and less, 2 cm. long and less; centrals 2 to 4, usually 4 in the form of a cross, 2.9 cm. long and less, the one pointing downward longest of all spines; spines all ^{about} same color, except newest ones slightly lighter, dull gray to brown drab colored; new growths in two places at side as well as at top center; flower from near top center, 5.7 cm. long, opening to breadth of 4 cm. in diameter; calyx tube bearing green bracts, these fading into reddish sepals, and these grading into petals; bracts at tips having areoles bearing wool and pliant white bristles 2 cm. and less long; sepals greenish at base, bronze in center with reddish tips; petals of varying widths,

Fitch

2

spatulate, vermilion colored with pinkish base; ovary widely ovate, 6 mm. deep by 6 mm. in greatest diameter; tube proper slightly larger cavity than ovary; throat 1.5 cm. long, 6 mm. to 1.5 cm. wide; stamens numerous, white, with purplish tips, anthers brown, laden with golden beads of pollen; pistil 4 cm. long, 1.7 to 2 mm. in diameter; stigma lobes 10, rich green, 4.5 mm. long.

Collected September 18, 1905, by Miss Ida M. Beals, Lake Valley, New Mexico.

17

05.846

16

5

6

x

① 6

2 1 2

2

17.5 cm

16 cm

1 cm

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

52

53

54

55

56

57

58

59

60

61

62

63

64

65

66

67

68

69

70

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

90

91

92

93

94

95

96

97

98

99

100

Selepiceretes

MacDonaldia

vagans

05.846 [-7]

Botanic Garden.

Not *Selenicereus* MacDonaldae.

If 05.847, " vagans.

Description by K. Brandegee (Zoe 5: 191. 1905)
of plant agrees with our stem. She had neither
flowers nor fruit.

Ribs 9. See above description.

Flower 15.2 cm. long; calyx tube and ovary
9.7 cm. long, 9 to 2.4 cm. in diam., dark brown
to greenish brown in color; areoles numerous at
ovary, distant 2 cm. and less on ~~stem~~ tube, round,
bearing short white wool and 7 to 9 weak white
or brown bristles 7 cm. and less long; upper
10 - 2 - 15 lower

areoles subtended by short red tipped bracts;
sepals scale-like, dull green, ^{inner ones lighter.} some with reddish
tips, ^{elongate-} acuminate; petals white, oblanceolate
to spatulate, rather ragged edged at top;
stamens white with greenish tinge, attached
in ring at top of tube and from about 1 cm.
below down to within about 2 cm. of bottom
of tube; anthers bright yellow; style light
green, 2 mm. in diam., about 12.5 cm. long;
stigma lobes ^{13,} ¹ bright green, linear, 8 mm. long,
spreading; ovary cylindrical, 1 cm. long, truncate
at top, 7 mm. in diam., filled with white
ovules.

See description in 1913, and of 10.1133 this yr.

O 5. 849.

~~Selenia~~

~~Cereus~~ grandiflorus

~~C. J. Pringle~~

Bot. Garden
1905.

Fruit near nodder carmine (Winsor & Newton),
globular, slightly pointed at top where dried
perianth remains attached, 6 cm. long, 4.8 cm.
in diam.; areoles in anti-clockwise spirals,
about 1.2 cm. distant and less, bearing short
cream colored wool and 12 and less ^{bright} spiny
bristles.

See photo and formation specimen.

O 5. 850. ?

Records evidently wrong as this No. is
Stapelia variabilis #7905. Cult. Public Library,
Savannah, Ga.

Selenicereus

05. 896.

Dr. E. Palmer,
near San Luis Potosi,

Mamillaria decipiens

[Found growing in ^{Mex.} top of
Calceurnus caespitosus]

See description on cards. Flowers: - filaments
whitish, very frail, 3 to 4 mm. long; anthers ^{light} yellow;
style whitish, exert nearly 2 mm. beyond filaments;
stigma lobes 3, 1.5 mm. long, spreading, slightly re-
flexed.

11-9-14.

05.1067

Cereus

Plant flowering May 6, 1912; stems 12 to 14 mm. in diameter, climbing to height of ^{three or four} ~~several~~ meters by means of aerial roots, 5-ribbed, divaricate about 1 cm. apart, in color, green to dark green and dark purple; areoles whitish, pubescent, bearing spines, radials 6, 7 to 12 mm. long, light sandy colored; centrals same length as radial spines 2; areoles also bearing 3 bristles pointing downward and diverging; areoles about 1 cm. apart surrounded by dark purple rings; ribs about 8 mm. apart, transverse section making almost regular pentagon; furrow on lower side bearing aerial roots about 8 cm. long to assist in climbing; flower on tube 15 cm. long, flower being 10 cm. long, making 25 cm. total length; tube 1.5 to 3.5 cm. in diameter, largest where ~~flowers~~ ^{sepals and petals} begin, light bronze colored, bearing bracts, these in 13 closely set rows spiral to the right on the ovary, and on tube in 6 spiral rows arranged at intervals; areoles bearing ~~whitish~~ hairs whitish to light sandy colored and numerous white weak bristles 5 to

Fitch -

7 mm. long; ovary ovate, circular, 1 cm. long by 7.5 mm. in diameter;
stamens 5 to 12 cm. long; anthers 2.5 mm. long, shaped like a linear leaf,
canary yellow; filaments citron green, 13 and less cm. long; pistil 2 mm.
 stigma lobes 17, light canary yellow, umbraculiform
in diameter, 20 cm. long, exsert slightly beyond stamens; tube proper 2.5
cm. long; throat nearly 10 cm. long; petals oblong, obovate, acuminate,
white, jagged; sepals yellow and brown, linear, acuminate.

From McDowel's Garden, Tacubaya, D. F. 7/13/05.

05.1220

Mamillaria

Plant flowering May 8, 1912; globose, 2 cm. high, 2.5 cm. in diameter; tubercles cylindrical, plump, green, bearing spines, radial about 20, 2 to 3 mm. long, weak, white, slightly pectinate, centrals 4 golden brown, one standing out 2 to 3 mm. with short hook, the other three straight, somewhat connivent, about 5 mm. long; axils narrow, naked; flowers sessile, flowers coming out in small circle near top center 1.5 cm. long; calyx tube light green, 2 mm. in diameter at base, 3 mm. where calyx begins; sepals lanceolate, apiculate, greenish pink with creamy white edges; petals creamy white, some with slight streak of greenish pink in center; ovary almost set into plant body, small, globular; stamens 8 mm. long creamy white; anthers yellowish white; pistil 1.1 cm. long, pale green; stigma lobes 4, greenish yellow.

Another plant bearing same number flowering April 13, 1912; same as above, save following: 2.6 cm. high, 2.5 cm. in diameter; radial spines

Fitch.

longer and stronger; centrals dark brown and longer; petals about 14.

Collected on stony hillside near San Juan del Rio, Queretaro, Mexico,
August 17, 1905.

05.1257

(2-27-11 and 2-24-12)

Mamillaria

two stems, one

Plant caespitose, 4 inches high, 1 to $1\frac{1}{2}$ inches in diameter, the other $2\frac{1}{2}$ inches; tubercles large, full, outer surfaces somewhat diamond shaped, green round upper part, rusty colored on lower $\frac{2}{3}$ of plant; axils at top full of wool, no wool at sides; spines, radial none, central generally 4, one 1 to $1\frac{1}{2}$ inches long, tending downward, two about $\frac{1}{2}$ inch long divergent horizontally, slightly upward, one short, weak, opposite to largest one, pointing upward; spines ^{whitish} to drab colored ~~xxxxxxxx~~ tips; flowers sessile; corolla tubular, pinkish to light purple, petals 18, lanceolate, ~~xxxxx~~ stamens numerous but very slender and short; pistil longer; stigma lobes 6, long, dirty yellow.

NY Dr. A.

Fitch

05.1259

Echinocactus

"Pallote"

My Dad

Plant flowered April 23, 1912.

About 3 cm. high by 6.25 cm. in diameter, greatest diameter just above the ground; tubercles forming 8 spiral ribs, smallest at top, ~~the newer ones~~, the ones near ground being largest, 4-angled, obtuse above ~~and below~~ ~~those at top~~, acute at each side and bottom, dirty rusty colored at bottom, but newer ones ^{those at top} green at sides, with hard rough grayish mixed with brown ~~tips~~ tips; tips of older tubercles covered with dry bark-like core; in place of wool and spines, for protection, tubercles are hard and rough; areoles bearing spines only near top of plant, all of which point towards flower at center, most of them touching it; flower in center; petals sub-lanceolate, 18, 3 cm. long, acute, jagged; ^{creamy white} sepals creamy white with wide central linear stripe of reddish purple; stamens numerous, fine,

Fitch.

short; anthers golden yellow, clustered around pistil; pistil longer than stamens, stigma lobes 6, long, cream colored; spines central, 2-4, dull white, pliant, from 1 to 2.5 cm. long; radials none.

06. 36

C. F. Baker

Havana Prov., Cuba.

Selenicerepes

Stem ^{strongly} 6 angled, 8 mm. and less in diam., green, ^{bearing aerial roots} the upper side slightly bronzed; areoles distant 7 to 11 mm., bearing short grayish wool, 2 or 3 whitish hairs, and 3 to 6 ^{light} brown spines, one or 2 being central and usually slightly longer and stouter, 3 to 4 mm. long; flower 17.5 cm. long; calyx tube, including ovary, 10.5 cm. long, 1.5 to 3.5 cm. in diam., pale green below, tinged with bronze above; areoles numerous, bearing fine gray hairs, spiraled anti-clockwise, of much same color as tube, save at upper part of tube the upper parts of bracts becoming red, the bracts lengthening; sepals scale-like, outer ones dark brown with reddish tips, inner ones becoming yellowish brown, all linear apiculate; petals white, oblanceolate-spatulate, 6 - 10 - 15. 10 over

stamens very pale green, attached in small ring at top and on lower $\frac{3}{4}$ of tube save for about 1.8 cm. at bottom of tube; anthers golden yellow; style $\text{\textcircled{P}}$ pale green becoming creamy white at top, apparently lying in corolla in 2 elongated spirals so that when straightened it is exsert beyond petals 1.5 cm. and beyond stamens 3.5 cm.; stigma lobes about 15, linear greenish yellow; ovary globose, truncate, 7 cm. deep.

06.78

Selenicereus

Flowering May 17, 1912; stems light olive green, 4 and 5-ribbed, usually the latter, 2 cm. thick and less; ribs low, rounded, bearing areoles at intervals of 2 cm. and less; areoles circular, 3 mm. and less in diameter, bearing small covering of dirty wool and usually 7 spines, one central, 2.7 mm., stout and sharp; ^{nocturnal, having faint delicious odor, open slightly still at 10.00 a.m.,} flower 26 cm. long; calyx tube 14 cm. long, 1.5 to 4 cm. in diameter, light brown madder, ^{tinged with green,} according to Winsor and Newton's Water Colors Chart, slightly lighter near top of tube; part around ovary covered with bracts in 16 rows, spiral to the right, and part above bearing bracts in 6 spiral rows turning to the right, going completely around tube in entire length; bracts having areoles bearing white wool, white weak bristles, 6 mm. long and less, and white hairs 2 cm. long and less, which ~~xxx~~ grow out from upper central part of slight longitudinal enlargement of the tube; bracts slightly darker than tube, 2 mm. wide, 5 to

Fitch.

17 mm. long, tapering to tip, almost enclosing areoles; bracts grading into sepals slightly lighter colored at base of outer row, becoming brown to dark brown at tips; sepals about 11.5 cm. long, 6 mm. wide and less, long acuminate, inner ones lighter colored; petals pure white, about 2 cm. shorter than sepals, spatulate, apiculate; ovary almost ^{spherical} ~~circular~~, 8 cm. in diameter; tube proper 2.3 cm. long, 5 mm. in diameter; stamens numerous; filaments pale green, except white at upper part; anthers light pale yellow; style same color as filaments; stigma lobes 20, umbraculiform, lemon yellow.

Collected by Dr. Ed. Palmer April 30, 1910 at Panuco, S.W. of Tampico, Mexico. See 07.276 (photo 585, 582), a *Selenicereus* from Barranca de Zacuapan, Vera Cruz, Mexico.

06.90

Opuntia tuna

Flowering May 14, 1912; joints elongated, elliptical, about 16 cm. long, 5 cm. wide, 1 cm. thick, sage green, bearing areoles at intervals of 3 to 4 cm.; new joints and flowers branch from ends of older ones; areoles surrounded by a darker ~~color~~^{green}, full of short stiff straw-colored glochids, also bearing one spine near raw umber colored, 7 to 13 mm. long, curved slightly downward; flower node surrounded by a growth of glochids; calyx tube 3 cm. long, 16 mm. in diameter at top, terete, tapering downward, with areoles near top bearing glochids and some bristles same color as those on joints; bracts green, broad at base, apiculate; sepals greenish, fading into yellow, grading into primrose yellow petals; petals broadly spatulate, slightly lighter colored on outside, 4 cm. long, 2.5 cm. greatest width; ovary inferior, having parietal placenta, 7 mm. long, 2.5 mm. greatest diameter, terete, tapering downward to point at bottom; throat wide and very shallow; stamens

numerous, upright, 17 mm. long and less to about half, filaments same color as petals; anthers slightly lighter; pistil same height as stamens; style milky white, slightly obovate in shape, 3 to 4 mm. in diameter, 18 mm. long; stigma lobes 5, greenish dirty white.

Collected in April, 1906, by J. Hobart Egbert on Punta Blanca Island, near Punta Rassa, Florida.

06

107

John T. Webb.

Osprey, Fla.

5-18-06.

Hylocereus

Plant sharply 3-angled, vinelike, green, bearing aerial roots; ribs serrated; areoles ~~at top of each~~ indented, bearing 1 to 2 short, ^{stout} dark brown to black spines 4 cm. and less apart; flower 31 cm. long; stem 16.5 cm. long, 4 to 8 cm. in diam.; bracts large, ovate, green, soon grading into pinkish green; ^{lanceolate-apiculate} sepals; petals white, elliptical, mucronately tipped, 4 cm. wide; stamens numerous, light yellow, not so long as style, attached along throat nearly to bottom; anthers bright yellow, 5 mm. long; style light yellow, 2.3 cm. long, 7 mm. in diam.; stigma lobes lemon yellow, 2.8 cm. long and less, 2.5; ovary 1.6 cm. long, 1 cm. ~~in~~ in diam., ellipsoid, truncate at top.

Nightblooming

7-11-14

06.124

H. Pittier.

Opuntia bella Britton & Rose.

06.125



✓ 15 cm - 7-8 mm - L - 6 - 5 - 4 - 3 - 2 - 1 - 0
4 - 5.5 cm - ✓ - 16 - 15 - 14 - 13 - 12 - 11 - 10 - 9 - 8 - 7 - 6 - 5 - 4 - 3 - 2 - 1 - 0
✓ 12 mm - 2 mm - L - 6.5 cm - 2 mm - L
✓ 16 - 15 - 14 - 13 - 12 - 11 - 10 - 9 - 8 - 7 - 6 - 5 - 4 - 3 - 2 - 1 - 0
L 10 8-9 mm - 7 - 6 - 5 - 4 - 3 - 2 - 1 - 0
L 10 8-9 mm - 7 - 6 - 5 - 4 - 3 - 2 - 1 - 0
L 10 8-9 mm - 7 - 6 - 5 - 4 - 3 - 2 - 1 - 0

06.133

Cereus

Flowering May 14, 1912; plant supported attaining height of about 6 dm.; stems 4-ribbed, acute angled, green on part not directly exposed to sun, greenish purple to Indian purple where so exposed; ribs 5 cm. apart, bearing areoles at intervals of 1 to 2 cm.; shallow furrows separating ribs bearing few aërial roots to aid in climbing; areoles slightly projecting, and bearing 3 to 10 spines, sometimes a few hairs, a little wool; spines not divided into radials and centrals, 2 to 4 mm. long, medium drab to straw colored, flexible; wool slight, dirty white; flower growing from areole on rib, 6 cm. long; calyx tube ^{3 cm. long, nearly 1 cm. ~~is~~ thick,} bronze colored fading into pinkish purple part around near tip; ovary strongly tubercled, with areoles bearing white hairs 1 cm. long and less, and greenish bronze bracts, wide at base, tapering to rounded tip; bracts on calyx tube outstretched at right angles, except those nearest sepals, these curved upwards, 2 to 16 mm. long, grading into sepals and

Fitch

these into petals; petals and sepals of same form and shape, the latter slightly thicker and more waxed-like and slightly darker; petals purplish pink, oblong elliptical; ovary oval, 6 mm. long, 4 mm. in greatest diameter; tube proper large oval cavity, 8 mm. long, 5 mm. in greatest diameter; throat 13 mm. long, slightly funnel shaped; stamens numerous; filaments whitish, growing mostly from bottom and top of throat, pliant, dirty yellow; anthers pale yellow; pistil slightly exsert beyond stamens; style pink, lighter at base, 4 cm. long; stigma oval, circular, 4 mm. long, pinkish.

From New York Botanical Garden.

06.201

Cactus communis

Cactus Gardens
Jamaica.

Fruit 3.7 cm. long, terete, 1.4 mm. in diam. at top, slightly curved, pointed at base, light magenta colored, shiny at top, protruding only about half its length above cephalium. pulp a thin juicy almost colorless ~~mass~~ jelly-like or juicy mass; seeds numerous, black, shiny, flattened, ^{ovate}, having a rim like a prune pit, slightly pitted, 1.2 mm. long, ~~ovate~~.

06.207

Nopalea coccinellifera (L.)

Flowering May 10, 1912; supported, attaining height of about 35 dm.; joints elliptical to almost linear, about 3 dm. long, 8 cm. wide and 1.5 to 2 cm. thick, dark green except on newer joints, on sides are raised traces of the ^{lines for the} diamond-shaped quadrilateral seen on some new joints of *Opuntias*; areoles 1.5 to 4 cm. apart, gray, surrounded by small dark spots, nearly spineless, sometimes vestiges of 1 or 2 small spines and 2 or 3 short bristles; flower 7.5 cm. long; calyx tube 3.5 cm. long, terete, tapering to node, largest diameter 2 cm., slightly darker green than joints; areoles on calyx tube bearing yellowish bristles; sepals red, short, wide at base, apiculate, grading into petals same color and shape except somewhat longer; ovary ovate, circular, having parietal placenta, 5 cm. long, 5 cm. in greatest diameter, inferior; style enlarged immediately above the constricted base to 6 mm. in diameter, elsewhere 1.5 to 2 mm. in di-

Fitch.

anther, 4.5 cm. long, pink except white at base; stigma lobes, 7, 5 mm.
long, green slightly tinged with yellow, exsert beyond stamens slightly;
stamens numerous, clustering round pistil; filaments red tinged with purple;
anthers light yellow; throat 1 cm. long, 6 mm. wide at base, 7 at top.

From Botanical Garden of Jamaica.

06.1012

Cereus princeps

No locality given

Plant triangular, vinelike, usually having on ~~the~~ flat side, the third rib arising on opposite side $\odot$ perpendicularly, green: flower 27 cm long, The stem ^{curving slightly} 1.2 to $\odot$ cm. in diam., light greenish having a few areoles bearing 1 or 2 short, dull colored, spines. Ovary ~~along~~ oblong ovoid, ^{1.2} 0 cm. long, ^{2.5} 0 mm. in diam., filled with ovules; style, white, yellowish white at top, ^{1.7} 0 cm. long, ^{1.7} 0 mm. in diam.; stigma lobes 14, ^{1.7} ~~1.5~~ cm. long, yellowish white; filaments arising from upper half of ~~throat~~ tube, white, numerous; anthers ~~pale lemon yellow~~ cream colored.

6-29-14.

06. 1030.

Jn. 9 J. S. Rose. Cuernavaca,
Mexico.

Cereus triangularis

6-8-15

06.1160. Mamillaria Karwinskia NY

Plant caespitose, each stem about 6.5 cm. in diameter and about 1.25 dm. high; axils nearly full of wool; hairs about 2.5 cm. long growing from axils and project beyond tubercles; tubercles irregular shaped, cone, rhomboid and triangular shaped; areoles at top and often on sides bear wool; spines, radial none; central, 4 and 5, 1 to 1.5 cm. long, one pointing down usually longest, darkest, whitish to dark brown, with tips brown to very dark brown; flowers sessile; corolla tubular, about 1 cm. in diameter; petals lanceolate, jagged, 14, creamy white, often with wide linear reddish-brown stripes at center; stamens numerous; clustered; anthers light yellow; pistil exsert about .5 cm. beyond stamens; stigma lobes 5, pale yellow.

Flowered April 11, 1912.

Fitch

06. 1230

Opuntia

near Vera Cruz, Sept. 1906. J.M. & J.S.

Rose. Flower ¹⁰ cm. long; stem ⁵ cm. long, 6 to ¹⁴ mm. in diam., dark green, slightly glaucous, bearing few areoles, ^{near top,} filled with short weak glochids and subtended ^{greenish sepals grading into bright yellow petals;} by small bract; ovary ⁶ mm. long, 2 mm. in diam., somewhat pointed at bottom, ^{filled with ovules,} growing near top of stem; style ² cm. long, ⁶ mm. in diam., ~~smaller~~ smaller at top, creamy white; stigma lobes 9, pale green, ⁴ mm. long, thick; filaments, numerous, growing all over wide flat throat, longer at outside, 8 to 19 mm. long, lemon yellow; anthers smaller, ^{lemon yellow.}

07. 65.

R. H. Peters.

Lake Izabal, Guatemala.
On Tree Trunks.

Hylocereus minutiflorus Rose

See published description: stems bearing aerial roots; some areoles large, protruding, others small as described; bracts at base of flower tube light cress green [R] with reddish tips; upper ones Vandyke red on upper half. The outer sepals slightly lighter, while inner ones Reed yellow [R]; petals creamy white, outer ones tinged with yellow; style 2 cm. long, white, 2 mm. in diam.; stigma lobes 10, 6 mm. long, ~~the~~ whitish; anthers baryta yellow [R]; filaments attached all over the short wide throat, white: ovary globular, ^{about} 4 mm. in diam.

07. 65.

R. H. Peters

Lake Izabal, Guatemala.

Hyllocercus minutiflorus

(See description of last year.)

07. 68

R. H. Peters. Lake Itzabal, Guatemala.

Cereus

On tree trunks.

Plant climbing, ^{reddish green,} vine-like; ^{with aerial roots,} Selenicereus type;
ribs 8, low; areoles 10 to 12 mm. apart, bearing
short translucent spines and bristly light colored
hairs.

Flower 23 cm long; stem 15 cm  long, 13 mm.
to 3.5 cm in diam; style light green, creamy white
at top, 20 cm. long, 3 mm. in diam.; stigma lobes
26, lemon chrome, linear; stamens numerous,
attached nearly to bottom of tube, numerous,
~~very~~ creamy white, tinged with green; anthers
small, light yellow.

07.92

Opuntia

Plant flowering May 6, 1912; joints 15 cm. or less long, 9.5 cm. or less wide, 1.5 cm. or less thick, when young nearly oval, rich green colored with dark spots round areoles and extending downward, older ones elliptical, dark green with darker and larger spots round areoles; areoles 1 to 2 cm. apart, on older joints filled with brown glochids, 2 to 3 mm. long, on newer ones glochids fewer, shorter, lighter colored, and partly hidden in small amount of grayish wool from areoles; spines almost lacking, two on upper edge of oldest joint; joints branch from upper edge; flower 5 cm. long; undeveloped fruit same color as newer joints, 2 cm. long, terete, tapering downward, 14 mm. largest diameter, bearing areoles filled with short, light brown glochids; sepals mostly acuminate, from bronze colored to greenish yellow with light bronze tips, grading into petals widely obovate with rounding tips, yellow, margins fine, except

Fitch.

slightly jagged at tip; ovary inferior, ovate, circular, 5 mm. long, 2 mm. in diameter; stamens numerous, greenish at base, upper part pink; anthers small, whitish; pistil pink, 1.5 cm. long, 3 mm. in diameter; stigma lobes 6, light pale green, 3 mm. long.

Collected by C. A. Purpus near Silver Spring, Tamaulipas, Mexico, in 1907.

07. 101

6 - 30 - 14

Cereus

Dr. E. Palmer. In soil among
underbrush in a canyon.

Feb. 24, '87.

Victoria, Tamaulipas, Mex.

~~The~~ Plant 3 to 7 angled, generally 3-angled? light green;
ribs thin, ~~high~~ bearing areoles ~~at~~ distant about 1.5 cm.;
areoles bearing 2 or 3 central spines, 6 to 9 radials all
~~a~~ drab colored, centrals larger, ^{2.2} ~~1.8~~ cm. long or less.

Flower 18.2 cm. long; stema 1.6 cm. long, ^{1.1 cm.} ~~1.1 cm.~~ to ^{3.4} ~~1~~ cm.
in diam., green, lighter at top, bearing ^{a few} areoles ~~at~~
~~side~~ bearing 2 to 4 small ^{horn colored} spines; ovary ^{1.2} ~~1~~ cm. long,
⁴ mm. in diam.; pointed at bottom, truncate at top;
style white, tinged with pale green at top, slightly
roughened at top; stigma lobes 10, creamy white, 1 cm.
long; filaments white, attached nearly full length of
throat to bottom of stem, numerous; anthers small, pale yellow;

07.101

Cereus

Dr. E. Palmer
Victoria, Tamaulipas

"Grew in soil among
underbrush in a cañon.

Flower 22 cm. long; stem 16 cm. long, 1.1 to 4 cm.
in diam., green, light green at top, bearing a few areoles;
most numerous at ovary
areoles, bearing 1 to 5 short whitish spines, these weak, 2 to
7 mm. long; areoles at top of flower tube spineless,
but bearing short bracts; sepals light green, linear
apiculate, 4.5 cm. long and less; petals white, narrow
elliptical, apiculate; style slightly exsert beyond
stamens, white to creamy white, 16 cm. long, 2.6 mm.
in diam.; stigma lobes 13, linear, 1.5 cm. long, creamy
white; stamens attached to within 4 cm. of bottom
of tube, white, with ~~rapid~~ yellow anthers; ovary
cylindrical, 12 mm. long, 5 mm. in diam.

7-11-14

07.204

Selenicereus.

Flowering May 21, 1912; stems 4-ribbed, these low, slightly ridged, but rounding; stems light malachite^{green} except near flower and below for some decimeters, ^{where} furrows light Indian purple and ridges terre verte, all these colors as in Winsor and Newton's Artists' Oil Colors save Indian purple, ^{this} from their Water Colors; areoles circular, 1 to 1.5 mm. in diameter, at intervals of 8 to 14 mm., bearing small amount of dirty white wool and downward hanging dirty white hairs and bristles, 1 to 4 small short spines, varying from dark brown to light horn colored; aerial roots growing from middle of furrows on stems; stems nearly regular, measuring 12 to 14 mm. on a side; flower growing from rib; flower 29.5 cm. long; calyx tube 16 cm. long, 1.7 to 4 cm. in diameter, curved immediately above ovary and then back slightly just below calyx; calyx tube bearing numerous hairs, burnt umber color, 3.5 cm. long and less; part around ovary having areoles ranged

Fitch.

in 13 rows spiral to right, these bearing small spines in addition to (2 hairs above mentioned, both same color; tube above having areoles bearing hairs, spines and pink bracts; areoles ranged in 8 spiral rows turning to left, making nearly one complete revolution in the length of the tube; tube light pink, 10 to 17 mm. long, 3 mm. wide at base, tapering to point; areoles on upper part of slight ^{narrow} longitudinal projection, bracts growing out from below and almost enveloping areole, with hairs and spines; spines only found short distance above ovary; sepals, outer ones, light olive brown; newer ones lighter, 12 cm. long, 4.5 mm. wide, linear, long acuminate; petals pure white, slightly shorter than sepals, 2.5 cm. ^{greatest} width, 10 cm. long, spatulate, slightly jagged at tips; ovary globular, 9 mm. deep and 8 mm. in diameter, truncate above; tube proper 2.7 cm. long, 7 mm. in diameter; stamens numerous, creamy white, tinged with green, attached to top and lower $\frac{2}{3}$ of throat; throat 11 cm. long; anthers canary yellow; pistil white tinged with green on lower part; style 22 cm. long, 3.5 mm. in diameter; stigma lobes about 20, light greenish yellow, umbraculiform, 1.5 cm. long. Collected by W.R. Maxon at Bayamita, Cuba, 4/7/07.

07.226

C. A. Purpus.

Rocks, Rio de Santa Maria,
Vera Cruz, Mex.

Selenicereus Pringlei Rose

Stem purplish green to light green, glaucous,
8-ribbed, 1.7 cm. in diam.; ^{bearing aerial roots;} areoles 9 mm. apart, bearing
8 or less horn colored spines 1 cm and less long, and
4 or 5 downward pointed weak ^{whitish} spines; flower 22.5
cm. long; ~~the~~ corolla tube including ovary
14 cm. long, slightly curved near top, covered with
whitish bristles and wool, especially at ovary; areoles
on tube in 5 spirals, the spines and wool being subtended
by dark Indian red bracts; sepals burnt amber,
elongated lanceolate, ~~gradually into~~ The inner ones
lighter colored, 8.5 cm. long, 4 mm wide; petals
spatulate, pure white (not mucronately tipped); ~~filaments~~
stamens numerous, pale green to creamy white at tip,
over

attached all along lower $\frac{3}{4}$ of tube and in
circles at top; anthers lemon ^{cadmium} ~~yellow~~; style, ^{hollow,} slightly
exsert beyond petals, 3.5 mm. in diam., pale green
to yellowish number at tip; stigma lobes about
20, 1.4 mm. long, pale lemon yellow; ovary
depressed globose, 5 mm. deep.
2 spec. flowers.

5 - 10 - 15

Different from 07.618 in number of ribs, spines,
color of flower, areoles on tube, color of bracts,
petals and sepals, etc.

07.226

Seleni

Cereus Pringlei

C. A. Purpus

Rio de Santa Maria, Vera Cruz,
Mex.

Fruit pear shaped save for the rather truncate top or neck to which is attached the dried perianth, 6.5 cm. long, 4.8 cm. in diam., near madder carmine, on one side madder carmine with purplish tinge; areoles in clockwise spirals, distant about 8 mm, bearing long white wool and about a dozen whitish spiny bristles 6 mm. long and less, subtended by a short bract.

See photo and formalin specimen.

9-2-15.

07. 229

H. Pittier

Rhipsalis ramulosa

Fruit dull white, globose, slightly flattened at base, the ^{6 mm. in diam.,} whitish dried corolla protruding like a fuse at the top; ~~seeds~~ pulp an almost colorless jelly-like mass with slight purplish tinge, sweetish; seeds ^{1.3 mm. long} black, ~~smooth~~ slightly pitted, slightly flattened, the lateral view being ovoid.

Handwritten musical notation on a single staff, featuring various notes, rests, and a diagonal line. The notation includes symbols such as '9', '2', '4', '5', '6', '7', '8', '9', '10', '11', '12', '13', '14', '15', '16', '17', '18', '19', '20', '21', '22', '23', '24', '25', '26', '27', '28', '29', '30', '31', '32', '33', '34', '35', '36', '37', '38', '39', '40', '41', '42', '43', '44', '45', '46', '47', '48', '49', '50', '51', '52', '53', '54', '55', '56', '57', '58', '59', '60', '61', '62', '63', '64', '65', '66', '67', '68', '69', '70', '71', '72', '73', '74', '75', '76', '77', '78', '79', '80', '81', '82', '83', '84', '85', '86', '87', '88', '89', '90', '91', '92', '93', '94', '95', '96', '97', '98', '99', '100'.

07.233

C. Wreckle.

Hylocereus costaricensis Costa Rica.

Fruit preserved in formalin, a
fine large ($3\frac{1}{2}$ in $\pm$ in diam.) red
~~fruit~~ over.

8 - 19 - 15

07. 245

H. Pittier. Costa Rica.

Epiphyllum thomasiarum

Flower 28 cm. long; ~~stem~~ calyx tube, including ovary, 17 cm. long, 1 to 3 cm. in diam., curved strongly, light green on lower half, with bracts 1 to $1\frac{1}{2}$ cm long of same color; upper part of tube pinkish. Bracts ^{oblancoolate} ~~elongate, apiculate~~ grading into orange-cinnamon colored ^{sepal} ~~sepals~~ 10 cm. long by 1 cm. wide; petals white, oblancoolate to spatulate, 2 cm. wide and less; style white, 3 mm. in diam., 23 cm. long; stigma lobes 14, whitish, 1.5 cm. long, spreading, linear; filaments numerous, bright yellow, attached along upper $\frac{2}{3}$ of tube; anthers small, light brown. ovary 1.6 cm. long, 4 mm. in diam., truncate at top.

9-18-14.

07.246



✓ 12.5 cm - 1.8 mm - L



✓ 1 cm - 1.2 cm - 1.7

✓ 6.7 - 1.1 } 6.5

✓ 8 mm - 1.2 cm - 1.7



✓ 9 mm - 1.2 cm - 1.7

✓ 1.3 cm - 1.2 cm - 1.7

✓ 4 cm - 1.2 cm - 1.7

✓ 1.1 cm - 1.2 cm - 1.7

✓ 1.2 cm - 1.2 cm - 1.7

✓ 1.2 cm - 1.2 cm - 1.7

Epiphyllum.

07.246.

07. 276

C. A. Purpus.

Barranca de Zacuapam,
Mex.

Selenicereus

Stem 5-angled, 1.5 cm. in diam., purplish green, bearing numerous aerial roots on lower sides; buds bearing or covered with light gray wool tinged with brown; flower 22.5 cm. long; calyx tube strongly curved, 13 cm. long, 1.5 cm. to 4.5 cm. in diam., greenish brown, the bracts slightly darker, the hairs from numerous areoles nearly white; sepals pinkish brown at base, to much darker at tip, the inner ones lighter, all scale-like, linear apiculate; petals white, spatulate; filaments numerous, very pale green, attached in circle at top and all along lower $\frac{3}{4}$ of tube; style ^{pale} green, yellow at top, exsert 4 cm. beyond stamens; stigma lobes about 20, creamy yellow, linear; ovary globose, 8 mm. deep.

5-17-15. +5-26-15

O 7. 318

W R Maxon

Cuba.

Selenicereus brevispinus

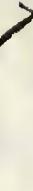
5-15-15, 5-17-15

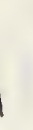
$$207 \times 4520,$$

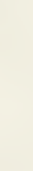
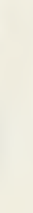
✓
2
-
✓
~~①~~
2
.
N
n
r
5
.

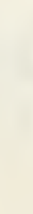
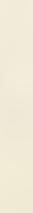
1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100

19 mm. ①





✓
2.5' — 5 mm ✓

1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100
 101
 102
 103
 104
 105
 106
 107
 108
 109
 110
 111
 112
 113
 114
 115
 116
 117
 118
 119
 120
 121
 122
 123
 124
 125
 126
 127
 128
 129
 130
 131
 132
 133
 134
 135
 136
 137
 138
 139
 140
 141
 142
 143
 144
 145
 146
 147
 148
 149
 150
 151
 152
 153
 154
 155
 156
 157
 158
 159
 160
 161
 162
 163
 164
 165
 166
 167
 168
 169
 170
 171
 172
 173
 174
 175
 176
 177
 178
 179
 180
 181
 182
 183
 184
 185
 186
 187
 188
 189
 190
 191
 192
 193
 194
 195
 196
 197
 198
 199
 200
 201
 202
 203
 204
 205
 206
 207
 208
 209
 210
 211
 212
 213
 214
 215
 216
 217
 218
 219
 220
 221
 222
 223
 224
 225
 226
 227
 228
 229
 230
 231
 232
 233
 234
 235
 236
 237
 238
 239
 240
 241
 242
 243
 244
 245
 246
 247
 248
 249
 250
 251
 252
 253
 254
 255
 256
 257
 258
 259
 260
 261
 262
 263
 264
 265
 266
 267
 268
 269
 270
 271
 272
 273
 274
 275
 276
 277
 278
 279
 280
 281
 282
 283
 284
 285
 286
 287
 288
 289
 290
 291
 292
 293
 294
 295
 296
 297
 298
 299
 300
 301
 302
 303
 304
 305
 306
 307
 308
 309
 310
 311
 312
 313
 314
 315
 316
 317
 318
 319
 320
 321
 322
 323
 324
 325
 326
 327
 328
 329
 330
 331
 332
 333
 334
 335
 336
 337
 338
 339
 340
 341
 342
 343
 344
 345
 346
 347
 348
 349
 350
 351
 352
 353
 354
 355
 356
 357
 358
 359
 360
 361
 362
 363
 364
 365
 366
 367
 368
 369
 370
 371
 372
 373
 374
 375
 376
 377
 378
 379
 380
 381
 382
 383
 384
 385
 386
 387
 388
 389
 390
 391
 392
 393
 394
 395
 396
 397
 398
 399
 400
 401
 402
 403
 404
 405
 406
 407
 408
 409
 410
 411
 412
 413
 414
 415
 416
 417
 418
 419
 420
 421
 422
 423
 424
 425
 426
 427
 428
 429
 430
 431
 432
 433
 434
 435
 436
 437
 438
 439
 440
 441
 442
 443
 444
 445
 446
 447
 448
 449
 450
 451
 452
 453
 454
 455
 456
 457
 458
 459
 460
 461
 462
 463
 464
 465
 466
 467
 468
 469
 470
 471
 472
 473
 474
 475
 476
 477
 478
 479
 480
 481
 482
 483
 484
 485
 486
 487
 488
 489
 490
 491
 492
 493
 494
 495
 496
 497
 498
 499
 500
 501
 502
 503
 504
 505
 506
 507
 508
 509
 510
 511
 512
 513
 514
 515
 516
 517
 518
 519
 520
 521
 522
 523
 524
 525

A single staff of handwritten musical notation. The notation includes various note values, rests, and decorative flourishes. The notes are written in a cursive, handwritten style. The staff is a single horizontal line. The notation is written in black ink on a light-colored background. The notes are of various durations, including quarter notes, eighth notes, and sixteenth notes. There are also rests and decorative flourishes interspersed throughout the staff. The overall style is that of a handwritten musical score.

Epiphyllum

07.464 Mamillaria sp. nov.

Flowered March 21, 1912. Plant examined 1.25 dm. high, 1 dm. in diameter; axils small, tubercles closely fitting; wool in axils; spines radial, small, light colored, 13 to 15; centrals, none; petals light purple, lanceolate to almost oblanceolate, margins fine; stamens several; anthers light yellow; stigma lobes cheese colored.

Dr. C. A. Purpus, # 410. Rocks, Rio de Santa Luisa, Mexico.

Fitch.

07.537

Brot from Bot. Gard. 10-7-07, by J.N.P.

Cereus

purplish to greenish,
Stems, ¹vinelike, bearing aerial roots, 5-ribbed; ribs
low; areoles ~~at~~ distant about 2 cm., bearing ¹ to 5 short
spines, 1 mm. long; flower 31 cm. long; ^{greenish to reddish} stem ¹18 cm.
long, 13 ~~0~~ mm. to 4.5 cm. in diam., bearing white hairs
and bristles from numerous areoles, subtended by bracts.
sepals lanceolate apiculate, dusky red,
lighter inside; petals white, spatulate, 2.8
cm. wide; style exsert beyond petals, 25 cm.
long, 3 cm. in diam., pale green, creamy white at
top; stigma lobes ~~2~~ lemon yellow, linear, 16, 16 mm.
long; filaments numerous, attached almost to bottom
of tube, pale green; anthers golden yellow. flower
not scented: ovary ovoid, 1 cm. long.

7-8-14

07.618

S. P. Goll. Celt. Phila. Pa.

Selenicereus Pringlei

Stem 1.5 cm. in diam., 5-ribbed, ^{bearing aerial roots,} purplish green, glaucous, areoles about 1.5 cm apart, bearing 6 or less grayish ^{brown} spines 12 mm or less long, and 3 ~~6~~ or 4 whitish bristles pointing downward; flower 29 cm. long, curved slightly; ovary covered with whitish bristles and wool from the numerous areoles; flower tube having areoles in 3 spirals, these like those of ovary, bearing long whitish wool and bristles about 1 cm. long, ~~subtended~~ and bracts, these purplish green at base of tube ~~and~~ to carmine ~~near~~ at top of tube; tube itself dark green at ovary to sea green at top; sepals 12 cm. long and less, ^{elongated lanceolate} reddish brown to light brown, grading ^{in color} into creamy white, spatulate, mucronately ^{tipped} petals; ~~petals~~ style bright green to yellow at tip, 2.5 mm. in diam., slightly over

exsert beyond petals^{handly hollow}; stigma lobes about 20, 1.4
cm. long, golden yellow; stamens numerous,
attached in ring at top of tube and then all
along lower two-thirds of tube, pale green to
creamy white at top; anthers lemon yellow; ovary
ovoid, 11 mm deep.

5 - 10 - 15.

Considerably different from 07.226.

O 8. 22.
Selenicereus

C. A. Purpus.
In Oak woods, near Tacuapam, Mex.

Stem 16 mm. and less in diameter, strongly 6-ribbed, glaucous, purple and green, bearing aerial roots; areoles distant about 1.5 cm., bearing 5 or 6 short brown spines and a few downward pointed bristles; buds covered with light sandy colored hairs; flower 30 cm. long, greatly curved; calyx tube well protected by light sandy hairs from the areoles arranged in spirals from left to right; bracts dark red; sepals scale-like reddish brown, the inner ones light brown; petals white, spatulate; stamens attached in ring at top of throat and all along lower $\frac{2}{3}$, pale green; anthers lemon yellow; style 3 mm and less in diam., pale green, yellowish white at top; stigma lobes about 25, pale lemon yellow, linear, 12 mm. long, ^{over}

slightly ~~exsert~~ beyond stamens; ovary depressed
globose 6 mm. deep.

5-24-15.

O 8. 23

Cereus Dr. C. A. Purpus. Barranca,
near Cosoquitla, # 32. On rocks & trees.

Night bloomer. Style light green, ^{except} light
yellow at top; stigma lobes numerous, citron
yellow; filaments attached full length
of throat, numerous, yellowish green; anthers
lemon yellow.

Plant 5-angled, angles obtuse;
dark green; areoles at intervals of ^{1.5} ~~1.5~~ cm. bearing
short, brownish spines (1.2 mm. long). Ovary
ovoid, 1 mm. long.

08.23. Cereus.

6-14.-12

28 cm — 15 cm —

1.7 4.5 cm — 6.8 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

1.7 4.5 cm — 16 cm —

Cereus near Conoquistla, XXXXII, C. O. Duran.

O. 8. 59

Platyop.

J. E. Lloyd. #20.

Opuntia

Zacatecas, Mex.

Flower 4.5 cm. long; spreading only to about 2.5 cm.;
(or embryo fruit)
stem 2.8 cm. long, 1.7 cm. and less in diam., having
tubercle-like protuberances arranged in spiral rows,
each protuberance ~~being~~ having at the top an areole;
areoles bearing a few, ^{reddish} brown glochids, whitish wool,
and sometimes burnt carmine colored bracts; petals
near chrome orange outside, cadmium orange inside,
lanceolate-apiculate, exsert nearly 1 cm. beyond
stamens; throat broadly funnelform, bearing stamens
all over surface; stamens yellow, numerous; anthers
whitish; style ^{yellow,} entirely hidden by stamens, 5 mm.
long, ^{2 mm. in greatest diam.} terminating in a point or single stigma; ovary
enclosed in case which projects downward into cavity in
embryo fruit.

08. 1001.

Opuntia camanchica.

J. N. Rose.

Langtry

Texas.

08.10.16

J. N. Rose. Langtry, Texas.

Opuntia

near purple madder,

Fruits, pear shaped, 3.5 to 4.5 cm. long,

2 to 2.8 cm. in greatest diam., the top rather

broad and flat save for depression at center,

and covered with a grayish circular skin-like

patch, the base sometimes ~~being~~ having

a neck, and sometimes without; areoles

distant 1.8 cm. and less, circular, full of

yellowish brown glochids and occasionally having a

few yellowish brown bristles; pulp a dark

red, forming a wall 5 mm. thick including

the skin, juicy, ~~not~~ having no marked

8-7-15 (over)

taste or flavor; seed cavity cup shaped
to narrowly obovoid, rather flat at top;
seeds surrounded by a very juicy red
jelly-like substance having but little
taste; seeds very dark red, 2.7 cm. in
more or less irregular diam.

59. 49

Schlumbergera Gaertneri

Flower etc.

1912

Card in card files.

09.49 Schlumbergera Gaertneri

Fruit,

Card in card files.

7 - 27 - 1915

09.53

Echinocereus

Flowering April 29, 1912; caespitose, 15 stems, several very small, largest ~~about~~ 9 cm. high by ~~about~~ 5 cm. in diameter, terete but with rounded tops; ribs 8, 9, slightly curved, on some stems to right, others to left, well tubercled; areoles about 1 cm. apart; ridges separated by wide shallow ~~furrows~~, somewhat crooked furrow; stems green ~~near~~ top changing to yellowish green and golden brown, ^{near base} with yellowish circles around most of the areoles; areoles circular, bearing 8 radial spines from 2 mm. to about 3 cm. long, and one central from 2 to 3.5 cm. long, and a little stronger than radials, all light drab colored, darker near tips, with small whitish bulbs at tips; spines on new growth shorter, weaker, much lighter; flower about 5 cm. long; ovary elliptical, circular, about 5 mm. long; tube proper 5 to 6 mm. long; throat 1.7 to 1.8 cm. long; petals about 12, bright cardinal red at tip to creamy white near base, spatulate

Fitch -

attached to throat its full length
 obtuse; stamens slightly longer than petals; ~~highly exserted~~ filaments
 white with light purple tips; anthers dark purple to violet, laden with
 golden beads of pollen; pistil longer than stamens; stigma lobes 6, green,
 3 mm. long; bracts ~~dark~~ some green and some darker than ~~petals~~ sepals,
 acuminate, ending in a hairlike extension 3 to 4 mm. long, and bearing
 spines, flexible, weak, white; sepals darker and shorter than petals, ob-
 long elliptical.

Collected by P. D. Berry in 1909, in "Grand Canyon of the Colorado,"
 Arizona.

09.80

Opuntia

Flowering May 7, 1912; joints elliptical to obovate, 13 to 17 cm. long, about 9 cm. wide, 1 to 2 cm. thick, glaucous with dark spots extending from around the areoles downward and widening, each of these, with each areole, enclosed by light green colored lines making a diamond shaped figure, the areole being near upper apex; areoles 1.5 to 2.3 cm. apart, on newer joints slightly pubescent, with green glochids sprouting in center; on older joints areoles filled with dark yellow glochids about 2 mm. long; spines almost none on new joints, on oldest joints many, needle-like, light gray with dark to brown tips, 1 to 3 from each areole, 1 to 3.5 cm. long; flowers 6 cm. long; undeveloped fruit bearing many areoles filled with yellow glochids and spruce colored wool; sepals apiculate, reddish purple, to greenish yellow with purplish tips, nearly as wide as long; petals oblong obovate, light yellow with slight streak of purple at center of tip; ovary cylindrical,
Fitch.

4 mm. long, 2 mm. in diameter; throat wide, 1 cm. long, pistil 2 cm.
long, 2 to 3 mm. in diameter, creamy white; stigma lobes 8, light pale
green, 4 mm. long; stamens numerous; filaments same color as petals;
anthers frail, white.

Collected in Guatemala by Glenn H. Wilcox in 1909.

09. 80.

Glenn H. Wilcox

Opuntia

Guatemala & Acapulco.

Joints obovate to elliptical, dark green, glaucous; areoles on upper edge bearing 1 or 2 short ^{grayish} ~~dirty~~ ~~colored~~ spines, and all areoles bearing short reddish brown glochids; areoles on new growth bearing leaves; flower 5 cm. long, with spread of about 5 cm. diam.; stem, or embryo fruit, 2 ½ cm. long, 2 cm. in diam. and less, dark green, glaucous; areoles ^{numerous} bearing bright yellow glochids and reddish brown wool; ovary small pointed at bottom, truncate at top;

throat funnellform, about 1 cm. deep, 1.5 cm wide at top; style ^{exsert beyond stamens} white with greenish tinge, 6 mm. in diam @ at largest place just above pointed base, 2 cm. long; stigma lobes 9, light green, 5 mm. long; stamens numerous, attached all over throat, short, deep chrome yellow; anthers light yellow; petals spatulate, chrome yellow,

09. 81

J. H. Wilcox,

Opuntia

Guatemala.

Joints ovate to elliptical, 13 to 19 cm. long, about 9.5 cm. wide, average thickness of 7 mm, thicker at ~~point of~~ bases, aside from being nearly covered with light brown spots of various sizes, ~~the~~ bluish green, the ~~rim of~~ margins of joints turning up and making joints sub-cup-shaped; areoles distant 1 to 2.2 cm., slightly raised, elliptical, full of sulphur to dirty brown glochids and on upper margins of old joints occasionally bearing 1 or 2 rather weak grayish spines 2 cm. and less long; fruits ^{near base} 3.3 to 5.3 cm. long, 2.4 cm. in ^{diameter} ~~when mature~~, ^{carmine} (over)

9 - 25 - 15.

greatest diam., and less, pear-shaped, truncate at top, the center of which is deeply depressed, at times as much as 1 cm.; ~~near~~ areoles round, about 9 cm. distant, bearing whitish wool and sulphur colored glochids; pulp dark red, juicy, sweet and pleasing to taste; seeds rather flattened into circular disks 5 mm. in diam., 2 mm. thick, rather light brownish in color with a reddish rim.

09. 120

J. E. Lloyd

Cult. at Auburn, Ala.

Selenicereus myticollis

Stem ^{up to 1.7 cm. in diam.}, 5-angled, purple to violet above, green below, glaucous, bearing aerial roots; ~~rib~~ ribs obtuse where stem is large, acute where small; areoles 1.4 cm. distant and less, bearing 2 or 3 whitish downward pointed bristles and 4 to 6 spines; spines 1.5 mm. long, gray, stiff, one being radial; flower 2.7 cm. long; calyx tube, including ovary 1.5 cm. long, slightly curved, greenish bronze, bearing white hairs and short weak bristles from the areoles, subtended by narrow red bracts; sepals narrow, outer ones brown, inner ones yellow, apiculate; petals creamy white, spatulate; filaments ^{very pale green,} attached in ring at top of tube, and from 2.7 cm. below to within 3.2 cm. of bottom of tube; style pale green, becoming yellowish at top; stigma lobes about 2.5, lemon yellow, linear. ovary globose, 7 mm. in diam.

7-1-15.

09.161

Kgl. Bot. Gard. Berlin.

gly. 09.

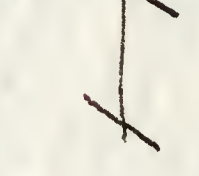
Cereus coniflorus Weing.

Flowers ^{to 24.5} 22 cm. long; stem ^{13 to 14} ~~12~~ cm. long, ¹⁰ 8 mm. to ^{3.4} 3.4 cm. in diam., bearing from numerous areoles white bristles and hairs from 2 mm to 12 cm. or more long, areoles subtended by small reddish bracts; Sepals yellowish green, ^{inner ones yellow} about 2 mm. wide, ¹ 1 cm. long; petals silky white, oblanceolate, about ^{1.5} ~~1.5~~ 1.7 cm. wide; ovary ^{ovoid} ~~globe~~ truncate, about 7 mm. long filled with ovules; style ^{light green} ~~green~~, ^{creamy white} ~~yellowish~~ at top; ^{1.7} ~~1.5~~ cm. long ^{1.7} ~~1.5~~ mm. in diam.; stigma lobes 14, lemon yellow, 1.2 cm. long; anthers gamboge yellow; filaments same color as style, numerous, attached all over throat nearly to bottom.

09.161 *C. coniflorus*. Lk.
6-14 x

L 13 cm - x L 24 cm - 
Φ      
+ x

      
2.5 cm - 6 mm - 9 mm -

      
2/3 1/3 1/3 1/3 1/3 1/3 1/3
05.1067.       

Cereus coniflorus 09.161

Königl. Botanischer
Garten, Berlin.
Juley, 1909.

09.161

Berlin ~~Königl.~~ Gardens.

Selenicereus coniflorus Weing.

See description of last year.

2 flowers from same branch, one spiraled
clockwise and the other one contra.

09. 185

Eichlam

Tecatemala

Epiphyllum Pittieri Britton & Rose.

Flower still open at 9.30 a. m.; calyx tube, including ovary, 10 cm. long, 4 to 7 mm. in diam., somewhat angular and enlarged at base, nearly white, becoming green at base, and bearing ^{at intervals} small brown bracts along full length of tube, these longest at top of tube when 1 cm. long; sepals pale green, scale like, elongate-apiculate, 5 cm. long, 3 to 4 mm. wide, bending downward along stem when flower opens; petals nearly white, elliptical to oblanceolate, mucronately tipped, radiating or spreading horizontally, 4 cm. and less long, 9 cm. and less wide; ~~and less~~ ^{stamens} white, numerous, erect but slightly spreading, 2.5 cm. long and less; anthers bright yellow, delightfully fragrant; style white, slightly enlarged at top, exsert 5 mm. beyond stamens ^{over}

inclined soon to topple over because of comparatively
heavy stigma lobes; stigma lobes, whitish, linear,
1 cm. long, radiating starlike

09. 186.

Eichlam

Guatemala

Epiphyllum grandis.

Flower 3 ϕ cm. long; stem strongly reflexed, pinkish to light greenish, bearing bracts 1 to 3 cm. long, same color as stem; ovary 2 cm. long, ellipsoid, pointed at both ends; stamens white, attached to upper third of ~~stem~~ throat, moderately numerous; anthers light yellow; style white, 3 mm. in diam., ^{slightly exsert beyond stamens,} ^{spreading} stigma lobes 16, ^{linear}, 2 cm. long, pale white; petals creamy white, oblanceolate; sepals pinkish to reddish, scale-like, narrow acuminate.

1914.

09. 186

J. Eichlam

Guatemala.

~~P~~ Epiphyllum grande

See card of last year.

See photo of these flowers.

09. 194

J. Eichlam #9293.

Acanthocereus pentagonus (L.) Guatemala.
boxariensis Britton & Rose.
[R]

Flower 25 cm. long, rainette green, becoming lighter colored at top; calyx tube, including corolla, 20 cm. long, 1.2 to 3.5 cm. in diam., fluted, bearing numerous areoles at base, and also ones at distant intervals throughout, the upper ones subtended by short, dark brown, microscopically tipped bracts; areoles at base bearing 2 to 4 weak white bristles 1 cm. long and less; sepals ~~same~~ rainette green, broad, scale-like, having sub-acuminate tips; petals white, elongated-oblancheolate; stamens and style included; style white, 2.5 mm. in diam.; stigma lobes 11, creamy white, linear 1.8 cm. long; filaments white, attached along upper half of tube; anthers cream color.

8-31-14.

09. 194.

J. Eichlam #9293

Guatemala.

Acanthocereus ~~baxanensis~~ ^{pentagonus}

(See description of last year.

8 - 16 - 15.

09. 1955.

J. E. Eichlam

Acanthocereus nitidus Guatemala.

Flower differing from description of flower of 10. 76 (this year) in following:
flower 20 cm. long, nearly straight;
bristles on calyx tube brown, thick, almost
spinelike, 1 to 2.5 mm. long; calyx tube
14.5 cm. long, 1.1 to 3 cm. in diam.; petals
white, lanceolate, apiculate.

09.197

Eichlam, Guatemala.

Nyctocereus guatemalensis sp. nov.
Cereus hirschtianus

See description by Dr. Rose in cards.

Style pale green, 2.9 cm. long, about 1.2 mm. in diam.; stigma lobes same color, linear, ^{1 cm.} ~~8 mm.~~ long, 6, spreading.

09. 233.

Seeds brot by A. Hrdlicka from Egypt.

Flower 35 cm. long; stem 17.5 cm. long, 3 to 8 cm. in diam., well protected by bracts quickly grading into sepals; bracts bluish green with Indian purple margins, lanceolate apiculate; sepals greenish, with purplish tips, inner ones yellowish green with pinkish tips, lanceolate apiculate; petals white, ^{to oblanceolate,} spatulate, 3.4 cm. wide, not quite so long as longest sepals, yet ~~longer~~ exserted beyond style and still more beyond stamens; style 26 cm. long, 7 mm. in diam., pale lemon yellow; stigma lobes lemon yellow, ^{linear} 2 cm. long, spreading, 27; stamens very numerous attached almost to bottom of tube, pale yellow; anthers lemon yellow; ovary 1.6 cm long, 1 cm. in diam., truncate at top. Very pleasantly scented. Night bloomer.

7-8-14.

09. 254.

Mrs. Gaillard

Canal Zone.

Rhipsalis cassytha

Fruit globular, 6.5 mm. in diam. and less, growing close against joint or stem but not at all imbedded or otherwise protected, with opaque whitish skin, retaining the dried corolla in ^{short} tuft at top; pulp a thin slightly sweetish ¹ almost colorless juicy mass; seeds black, 1.5 mm. long and less, about half as wide and somewhat flattened on sides, the sides having one edge nearly convex and the other ~~one~~ ^{one} approximately straight

09.520

C. Conzatti, Etla, Oaxaca, Mex.
12-5-09.

Mamillaria

Surely wrongly named. Lophophora^{type.}

Flower 2.3 cm. long, with spread of nearly 3 cm.; stem very short, well protected by white wool or down; sepals brownish with light colored margins, lanceolate; petals purplish with light margins, spatulate; style inserted, greenish at base, purplish at top, 1 cm. long; stigma lobes 4, short, dirty yellow; stamens short, attached all over wide shallow throat; anthers small, golden yellow; ovary very small.

09, 520

Opuntia bernardina

8 mi. n.w. of San Jacinto,
Calif. V. Bailey, #1284 "flowers
greenish yellow." V.B.

10. 76

Dr. E. Palmer, Mexico,
Panuco, S.W. of Tampico.

Acanthocereus

Stem erect, 3-angled, pale green; ribs thin, serrate; areoles distant ~~nearly~~ about 1.8 cm., bearing 6 to 8 grayish spines with dark tips, one central and 12 ^{and less} mm. long, the others 2 to 5 mm. long; flower straight, erect, 19.5 cm. long, grading from dark green at ovary to pale green corolla and upper part of tube; ovary moderately covered with areoles bearing short cream colored wool and 2 to 5 weak whitish bristles 5 mm. long and less; calyx tube, including ovary, 15 cm. long, 1.1 to 3.7 cm. in diam., bearing areoles at intervals becoming greater ~~near~~ as towards the top, the areoles at the extreme top subtended by broad red-tipped bracts which grade into ~~the~~ narrower -

7-15-15

Over

apiculate sepals with reddish tops; inner
sepals pale green, narrow apiculate; petals
opaque, whitish, narrow, somewhat obtuse;
filaments nearly white, slender, numerous,
attached from top of tube down to within
4 cm. of bottom; anthers yellowish cream
colored, 2 mm. long; style 15.7 cm. long in-
cluding stigma, 2.5 mm. in diam., white with
slight greenish tinge; stigma lobes linear, 13,
12 mm. long, well enclosed when flower
is closed; ovary globose, 7 mm. deep, truncate
at top, entirely filled with ^{white} ovules.

10.78

Selenicereus

Plant flowering June 1, 1912; stems 8 to 10 mm. in diameter; ribs ⁷ to ₈, slightly ridged but rounded; furrows 2 to 4 mm. deep; ridges bearing areoles at intervals of 10 to 17 mm., where ribs become slightly larger; areoles bearing 4 to 5 spines, one of these often central, 4 mm. long, near gamboge colored as given in Winsor and Newton's Artists' Oil Colors, also bearing 3 whitish bristles pointing downward and slightly diverging, slender, 4 to 5.5 mm. long; areoles circular, about 1.5 mm. in diameter; stems bearing on under side aërial roots 10 to 14 cm. long; stems varying in color from light malachite green to purple madder, as given in Winsor and Newton's Water Colors.

Collected by Dr. Palmer April 30, 1910, at Panuco, Mexico, southwest of Tampico.

Fitch.

10.98 (3-15-11 and 3-20-12)

Mamillaria
Cactus Texensis

Both in flower and fruit; tubercles entirely hidden by spines which ~~have an almost furry appearance~~ *these are very pubescent*; caespitose, four stems, each one about ~~1 1/4 to 2 cm~~ *2.5 cm* high, ~~1/2 to 1 inch~~ *1 1/4 to 2.5 cm* in diameter; spines, radial, very fine, whitish; ~~radial~~ *centrals* 5, not quite so white, ~~about 1/4 to 1/3 inch~~ *nearly 1 cm.* longer, stouter; flowers irregular around top of plant, whitish; corolla tubular, petals 14, lanceolate, acute, jagged; stamens numerous; anthers light yellow; pistils longer than stamens; stigma lobes 3; fruit red, about ~~7/8 mm~~ *1.5 mm* long, ~~1/8 inch~~ *1/3 inch* thick, tapering to point where ~~attached to plant~~ *at base*; seeds black.

Collected by B. Mackensen in Texas. (10.9.8) flowered 3-15-12

March 15 + 19, 1912

10/15 4/15 60 100 6.6

Fitch

10. 108.

Dr. Ed. Palmer, #504, 6-7-10.

Tampico, Mexico.

Cereus variabilis

light green, bearing aerial roots,

New growth 4 to 6-angled; ribs low, darker colored than the sinuses; areoles 1 cm. and less apart, bearing about 10 radial spines and 1 to 4 centrals, all grayish ^{with dark brown tips} 1.4 cm. and less long, centrals longer;

flower 2.2 cm. long; stem ^{light green,} 1.7 cm. long, 1.2 to 4 cm.

in diam., slightly curving; areoles numerous at base of stem, very distant near top, sometimes bearing spines (1 to 5) light and dark colored, ^{usually} with dark tips.

at top of stem areoles ^{narrow} spineless but bearing short, ^{dark green} bracts; sepals light green, ^{narrow} elongated-elliptical; petals same shape, white; stamens attached along upper half of tube, white, lower ones entirely inserted; anthers cream colored; style creamy white, cream colored at top, 15.7 cm. long, about 3 mm. in diam.; stigma lobes 13, linear, 1.8 cm. long, cream colored.

7-24-14.

10.153

E. Chaffey

[See letter of 8/10/'10.]
#9649.

C. Lerdo, Durango, Mexico.

Ariocarpus Lloydii Rose

Flowers 4 cm. long, spreading about 3 cm. ~~long~~; filaments numerous, attached all over throat, silky white, 12 to 13 mm. long; anthers, rich yellow; style 17 mm. long, $\frac{3}{4}$ mm. in diam.; dull white, tinged with purple at top; stigma lobes 6, linear, 3 mm. long.

10.163

Mamillaria

Plant flowering April 1, 1912.

Plant about 4 cm. high; diameter nearly 6 cm; largest diameter about 1.25 cm. from ground; top truncate; tubercles well hidden by armament and surrounded by wool at top, but not at sides except slightly; spines, radial, 24, appressed, pectinate, white, short, weak; centrals at sides usually shorter, stouter, white with tips slightly darker; at top centrals usually same length as radials, with dark brown tips; flower near top, sessile; petals sub-lanceolate, acute, light purple; stamens numerous, short; anthers yellow; pistil about 1 cm. long, much exsert beyond stamens; stigma lobes 5, small, whitish.

Collected near Mexico City by A. S. Hitchcock, in 1910.

Fitch.

10. 183

N. L. Britton

Madruzo, Cuba.

Selenicereus

Stem 1 cm. and less in diam., 8 ribbed, upper side dark purple, lower green and bearing occasionally aerial roots; ribs 2 mm. high, straight; areoles distant about 8 mm, round, ^{each} bearing 8 or 9 straw colored spines 5 mm. and less long, 1 or 2 being central, and a few whitish hairs mostly downward pointed. flower 21.5 cm. long; calyx tube ^{light bronze below, tinged with red above} 12 cm. long, 1.4 to 4 cm. in diam., slightly curved, bearing a few weak bristles near base, and from ^{each of} the numerous, clockwise spiraled areoles, long, wavy sandy hairs; bracts of same color as tube save more nearly red at top of tube; sepals brown, inner ones yellowish brown, all scale like, apiculate; petals white, oblanceolate-spatulate; Tube below filament 1.5 cm. long, fletted slightly, slightly granular under a glass; filaments numerous, pale green, attached

(same of course at the bottom)
all over lower $\frac{3}{4}$ of tube, and in ring at top; anthers
light golden yellow; style pale green, to creamy
white at top, slightly exsert beyond stamens;
stigma lobes golden yellow, linear, 9 mm. long,
about 20; ovary spherical 7 mm. deep.

5-26-15.

10.194

W. E. Broadway # 27689. (1967)
Trinidad.

Hylocereus

Flower 23 cm. long, curving slightly; bracts purplish at base, greenish, with dark red tips; sepals green to pinkish green, with reddish or pinkish tips, elongated, apiculate; petals purplish at base, lighter at top, oblanceolate, longer than style and stamens; style 5 mm. in diam., 17 cm. long, creamy white; stigma lobes about 20, 14 mm. long, linear, ~~same~~ light lemon yellow tinged with sulphur color; anthers same color, numerous, 7 mm. long; filaments attached nearly to bottom of throat.

Flowered 7-5-14
Described 7-7-14.

10.194

Broadway, Trinidad. 1907.

27689 N.Y.B.G.

Hylocereus

Flower 25 cm. long; calyx tube, including ovary, 13 cm. long, slightly curved, green, with large acuminate red tipped bracts 1 to 4.5 cm. long; bracts numerous and short at base, long at top, grading into sepals of a yellowish green color, elongate-oblanccolate, apiculate; petals, stamens and style included by about 3 cm.; petals purplish at bases, pinkish to creamy white at tips, elongate-oblanccolate; stamens numerous, Baryta yellow [IR], attached along upper half of tube; anthers Pinard yellow; style 5 mm. in diam., same color as stamens; stigma lobes 20, spreading, linear, 1.8 cm. long, divided at end, cream colored; ovary ellipsoid, 1.5 cm. long, 6 mm. in diam. Still ~~open~~ open at 9.30 a. m.

9-2-14.

10, 194

Hylocereus

Broadway

Trinidad I.

27689 n. y. B. I. no.

(See description of last year).

10.235 Echinocactus myriostigma

Flowering May 17, 1912; flower opening to diameter of about 4.5 cm., when closed, 6.8 cm. long; ovary wholly surrounded by areoles bearing light gray wool, long acuminate brown bracts, these making a dense covering for ovary; higher up, areoles fewer; calyx tube green on upper part, lower part light brown madder, as shown in Winsor and Newton's Water Colors Chart; bracts grading into sepals turning from brown to creamy white tinged with pale green except for tips and purplish red spot underneath; ^{petals} ~~these~~ grading into petals oblong oblanceolate, long acuminate; ovary oblong oval, 5 mm. long; 3 mm. in greatest diameter; no tube proper; throat begins 6 mm. above ovary, deeply funnel-shaped, lined with a rich yellow coat, 1.5 cm. long, 14 mm. across at top; stamens numerous, attached all along throat, clustering around pistil; filaments creamy white; anthers aurora yellow, as in Winsor and Newton's Artists' Oil Colors Chart; pistil exsert ^{Fitch}.

beyond stamens slightly; style 2.1 cm. long, 1.2 mm. in diameter, same color as filaments; stigma lobes 6, umbraculiform, 8 mm. long, creamy white tinged with yellow.

Collected by Elswood Chaffey in September, 1910, at C. Lerdo, Durango, Mexico.

13.5
12.4

10.254

F. Eichlam, Guatemala.

Epiphyllum guatemalensis Britton & Rose.

Flower 31 cm. long, much curved, due doubtless to thick growth of plants surrounding it; calyx tube, including ovary, 23 cm. long, citron green [Ridgway's Colors], bearing at intervals of 3 to 5 cm. ^{subapiculate} bracts about 1 cm. long. (See description).

Stigma and style included; style slightly exserted beyond the stamens; filaments white, numerous, attached to upper third of the tube; anthers cream colored, about 5 mm. long; style lemon yellow, the upper part darker; stigma lobes 15, linear, about 8 mm. long, orange colored, petals white, elongate elliptical.

8-8-14.

4-8-9-14.

10.262

Echinocereus caespitosus

Texas, Sutherland Springs.
B. Mackensen.

Flowering April 29, 1912; caespitose, 4-stemmed, one stem from one other; stems terete, tapering; ribs usually 13, sometimes 12, 5 to 7 mm. apart; ~~axils~~ furrows 4 to 8 mm. deep, well bridged over by spines; 1 to 2 mm. long, areoles golden yellow, slightly elliptical, on each rib 1 to 2 mm. apart, with only slight depression between; spines radial, 21, mostly golden yellow, some whitish with dark tips, pectinate, appressed, 1 to 6 mm. long, flexible; centrals none; flower from near top of stem, about 6 cm. long; bracts green to yellowish green, bearing needle-like spines darker than on stems, longer and weaker, porrect, ~~bracts~~ also bearing wool; petals oblong elliptical, apiculate, jagged, about 3 cm. long, light purple; sepals light purple with wide brown drab stripe; corolla about 3 cm. across and 3 cm. deep; stamens numerous, not clustered; anthers colonial yellow; pistil about 5 mm. longer than stamens; stigma lobes 8, green, about 3 mm. long.

Fitch

10.276.

Mo. Bot. Gard. 10/28/10.

Epiphyllum strictum

Flower 23 cm. long; calyx tube including ovary, 16 cm. long 8 to 12 mm. in diam., light green, lighter at top, bearing a few pinkish bracts, 1 cm. long and less; sepals slightly longer than petals, elongate, apiculate, light green; petals narrow, apiculate, white; stamens attached to upper third of stem, white with brownish anthers; style rose color [R], lighter at tip, white at base, 2 mm. in diam.; stigma lobes 18, lemon yellow, 1.2 cm. long, lemon yellow; ovary 1.4 cm. long, 3.5 mm. in diam.

9-4-14.

10,276.

From Mo. Bot. Garden 10-28-10.

Epiphyllum strictum

Flower: bracts 1 to 12 mm. long; sepals 6 cm. long and less, turning back down along stem of flower; petals opening and spreading horizontally in a plane, 6 cm. long and less; anthers grayish brown, 4 mm. long, slender; filaments extending ^{and less} 3.5 cm. above the throat, erect but slightly spreading, attached at top of throat down about 4 cm. in calyx tube; style 3 cm. in diam. and less, 17 cm. long, reddish purple, grading into light yellow at base and top; stigma lobes ¹⁵ rich yellow, linear, 1 cm. long, spreading; ovary cylindrical, 1 cm. long, 3 mm in diam.

10-24-14.

10.301

Jennings S. Cox. Santiago, Cuba.

Selenicereus

Stem purplish to light green, bearing aerial roots, ^{13 mm. in diam.} 6-ribbed; areoles 13 mm. apart, bearing 5 radial, 1 central, spine, all short (about 1 mm long) grayish brown, and 4 or 5 brown weak bristles pointing downward; flower 24 cm. long, slightly curved, yellowish brown, the tube, bracts, bristles and hairs and sepals being of same general color, with slight variation, the petals creamy white, narrowly elliptical; stamens pale green, numerous, attached at top and on lower $\frac{2}{3}$ of throat or tube; style pale green, yellowish at top; stigma lobes about 15, lemon yellow, 1 cm. long; anthers golden yellow; ovary globose, flattened at top, 8 mm. in diam.

10.330

Echinocactus hexaedrophorus Lem.

Plant flowered May 1, 1912; plant 8.5 cm. high by 10 cm. in diameter, globose; tubercles glaucous, irregularly hexaedros, 1.5 to 2 cm. thick; areoles a vertical slit about 1 cm. long and 2 to 3 mm. wide, on newer growth bearing small amount of fine whitish wool, which probably soon dries up or falls off, also bearing 4 spines, all radial, 2 cm. or less long, stout and sharp, diverging oppositely, two vertically and two laterally, this latter pair having longest spines; spines varying in color, some light cream gray, some dark with brown or reddish outer portion and with white tips; flowers in center, 3 cm. or less long, 2 cm. wide at base, opens to about 4 cm. in diameter; bracts green to brownish green; sepals brownish green to brownish purple, petals spatulate, purplish pink below to light creamy white at tips; ovary globose, circular, about 2mm. deep; no tube proper, throat nearly 1 cm. long, wide at mouth; stamens about 1 cm. long,

Fitch.

exceedingly numerous; filaments creamy white; anthers rich primrose yellow; pistil longer than stamens, white; stigma lobes 7, about 5 mm. long, curved.

Collected by C. A. Purpus at Minas de San Rafael, San Luis Potosi, Mexico, in 1910.

10.345

Mamillaria

Plant flowering April 26, 1912; 6.5 cm. in diameter, 5.5 cm. high, with two small stems 3 to 3.5 cm. in diameter, branching out at sides; axils at top nearly full of wool, while at sides wool often wanting; tubercles green save for diseased spots, 4-sided at base, with acute angles at ~~x~~ sides and obtuse angles at top and bottom, more obtuse at top; nose of tubercles somewhat rounding, truncate; areoles on young tubercles bearing dirty white wool, also bearing central spines, 4, and 5, longest one varying from 1 to 6.25 cm. in length, tending downward, usually curved, somewhat flexible, growing from center of areole, and surrounded by 4 usually, sometimes 3 smaller ones, one pointing down, two divergent laterally, and one porrect, the lower three being about same size, 2 to 5 mm. long; radials none; old tubercles bearing ~~xxxxxxx~~ spines, the long one dark grayish with slightly brown tips; shorter spines grayish white; spines

Fitch

on newer tubercles slightly lighter colored with darker tips, sometimes black; top center of plant a mass of wool and spines; flower, sessile, from near top of plant, tubular, about 5 mm. in diameter; petals about 12, oblong oblanceolate; stamens clustering round pistil, which is slightly longer; filaments rich purple, slender; anthers small; stigma lobes 4, dirty yellow; axils of old tubercles bearing wool much darker than newer tubercles; axils bearing small spines, most abundant or visible where no wool, & thus in old axils.

Collected in 1910 by C. A. Purpus, no. 16.

10.330.

6-17-12.

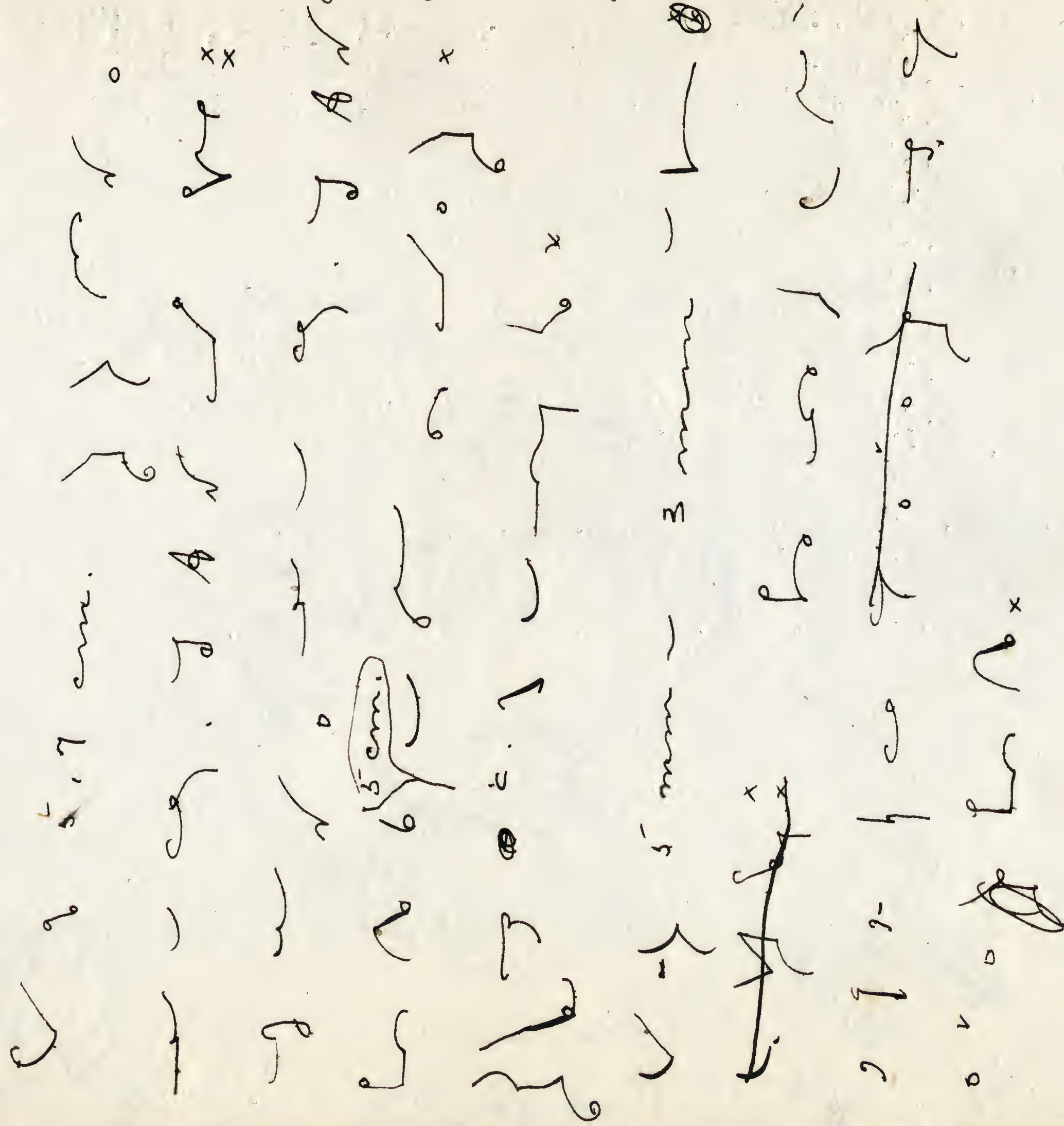
Echinocactus myriostigma

Minas de San

Dr. C. A. Purpus.

Rafael
Mexico.
1910.

Echinocactus myriostigma



10. 350

Dr. C. A. Purpus

Echinocactus myriostigma Minas de San Rafael,
Mexico.

Flower spreading 6 cm., about 4.5 cm. long; calyx tube, including ovary, short, only about 1 cm. long, covered with appressed whitish wool, and well marked with brown apiculate bracts, These grading almost imperceptibly into sepals with brown apiculate tips; sepals otherwise pale greenish yellow [Ridgway]; petals same color oblanceolate, obtuse at tip; stamens and style included; filaments numerous lighter than petals save at base on inside, attached all over funnelform throat; anthers cadmium yellow [Ridgway]; style 1.2 cm. long, creamy white; stigma lobes 6, linear, 6 mm. long, same color as style; ovary obovate, truncate at top, 5 mm. long.

10. 501

N. Y. B. G. # 24958

Hylocereus [stenopterus?]

Flower apparently nocturnal and closing early, 13 cm. long; calyx tube 5.5 cm. long, including ovary, well protected by numerous stout ovate bracts which lengthen at upper part and at the same time narrow into lanceolate apiculate bracts, bright green with reddish tips, the bracts on upper part of tube losing the upper parts, which separate from lower after ~~apparently becoming dead~~, turning a pale greenish color, leaving a straight transverse edge at place of separation; sepals wanting unless the elongated bracts be termed such; petals scale-like, about 8 cm.

7-14-15

(over)

long, 8 mm. wide at base, narrowing to the pointed tip, light purple lake [Winsor & Newton Artists' Oil Colors], darker at tip, lighter colored inside; filaments ^{1 to 1.5 cm. long} short, pale yellow, attached all over upper and wider part of tube; anthers of about the same color, 5 mm. long; style, including stigma, 7.5 cm. long, 5 mm. in diam, creamy white below, white above; stigma lobes 18, nearly white, 1.7 cm. long, spreading, exsert nearly 3 cm. beyond filaments, and yet enclosed by petals by 2 cm.; ovary cylindrical, truncate at top, somewhat narrowed below, 1.5 cm. long, 6 mm. in diam, filled with white ovules.

10, 11 33.

Rose, Standley & Russell
Mazatlan, Sinaloa, Mex.

Cereus vagans

Flower 21.7 cm. long; calyx tube and
ovary 13 cm. long, 1.6 to 1.8 cm. in diam., of a
greenish tawny color; areoles numerous at ovary,
few on tube save at the top where they are sub-
tended by small reddish tipped bracts; areoles
bearing 4 to 6 white slender bristles, 1 cm. long
and less; sepals scale-like, narrow apiculate,
slightly lighter colored than the tube; petals
oblanccolate, creamy white, mucronately tipped;
filaments pale green, attached in ring at top
of tube, and from 1.5 cm. below to within
4 cm. of bottom of tube, numerous; anthers light
lemon yellow; style 2 mm. in diam., creamy
white tinged with green ~~at base~~; stigma lobes 12,
1 cm. long, very pale lemon yellow; ovary cylindrical,

1.1 cm. long.

10. 1147.

Opuntia

Rose, Standley & Russell.

Maxatlan, Sinaloa.

#14172.

4-4-10.

Flower 4.7 cm. long, spreading 4.2 cm. in diam.; calyx tube including ovary 2.3 cm. long, 1.5 cm. in diam. and less, ~~in~~ ~~dark~~ dark green, having areoles at ~~frequent~~ ^{short} intervals filled with light brown wool and a few glochids, those at the top having 2 or 3 yellowish bristles 5 mm. long and less; sepals yellowish green, broad, at first short, soon grading into lemon chrome petals, these oblanceolate to broad elliptical; style and stamens included, the style exert beyond stamens 1 cm.; stamens attached all over wide shallow throat, same color as petals, the anthers slightly lighter; style 2 cm. long, 3 mm. and less in diam, pale green; stigma lobes 7, light green, 4 mm. long, turgid; ovary 5 mm. long, truncate at top, pointed at bottom.

8-7-14.

10.1148

Opuntia

Flowering May 22, 1912; joints elliptical, 4 to 5.7 cm. wide and 9 to 11.2 cm. long, on under side of new joint and on calyx tube, terre verte as given in Winsor and Newton's Artists' Oil Colors, on upper side darker; lower joints nearly covered with dirty gray scarious scales, uncovered parts lighter green in various shades; areoles on joints in diagonal rows from 5 to 12 mm. apart; those on calyx tube also in diagonal rows, 5 mm. and less apart; areoles bearing glochids 2 mm. long and less, light gamboge as given in Winsor and Newton's Artists' Oil Colors; glochids shortest on new joint; areoles on new joints bearing slight amount of dirty white straggling wool; areoles near edges of joints sometimes bearing a single spine, 2 to 12 mm. long, ivory colored and slightly darker, with yellowish tips; flower 5 cm. long; calyx tube ovate, 2 cm. long, 1.5 cm. in diameter, bearing bracts long acuminate, 5 mm. and less wide and of varying lengths, dark warm mono-

Fitch.

chrome as in Winsor and Newton's Artists' Oil Colors, also bearing spines²
same color as glochids, 2 to 9 mm. long, these, with bracts, closely en-
circling flower; bracts grading into sepals slightly longer, longer acuminate to apiculate; petals aureolin on inside as in Winsor and Newton's
Water Colors, much lighter on outside; ovary ovate truncate, 5 mm. in diameter, 4 mm. deep, having parietal placenta; throat 6 mm. deep, 5 mm.
wide at top; stamens numerous, 11 mm. long; filaments attached full length of throat, light pale green; anthers creamy white; pistil exsert slightly beyond stamens; style long-ovate, 2 cm. long, 4 mm. in greatest diameter, 2 mm. at top; stigma lobes 8, creamy white, 4 mm. long.

Collected by J. N. Rose at Mazatlan, Sinaloa, April 4, 1910.

11.109

H. Pittier

Rio Fato Valley,
Panama.*Welverocereus Pittieri*

Stems dull to pale green, 3-angled; ribs thin, acute, distant 1 cm. and less, bearing at intervals of 1.3 to 2.4 cm., small brownish areoles, the indentations giving a serration to the rib; areoles bearing 1 or 2 white or grayish bristles 4 mm. long and less, ~~and those near end of stem a few whitish hairs~~; flower 5 cm. long slightly curved, with a spread of about 4 cm.; calyx tube 2.7 cm. long, 1.8 cm. in diam., green, the upper part becoming greenish yellow, bearing 6 to 8 bristle-like white hairs from the numerous areoles.

over

8-26-15.

these subtended by, and almost hidden
by, long incurved bracts, ^{1 mm. to 1.5 cm. long and} green at base
but with yellow tips, ^{the} ~~but~~ bracts at
top being longer and almost wholly
greenish yellow; sepals narrow, sub-acute,
greenish yellow, grading into creamy white
sepals of same form; filaments creamy
white to cream colored, attached all over
the rather narrow ^{funnel form} throat, and extending down sides
of the cylindrical tube proper (4 mm. in diam.
by 7 mm. long); anthers flattened, 2.4 mm. long,
bright yellow, turning brown at tips; style
white, 3.4 mm. long, about 1 mm. in diam.,
stigma lobes about 8, very delicate, whitish
about 4 mm. long; ovary of about same size and shape
of tube proper, hollow at center.

Opuntia ~~*Speggazzinii*~~ sp. nov.?

11. 118.

Dr. Rose has my description.

A remarkable plant. See ^{flower} fruit
and description made in 1915.

See No. 11. 118, recd. from J. T. Beards,
as from Kearney Park, Fresno Co., Calif.

11.142

Mr. F. V. Coville #1629.

Rathbunia

Fruit brilliant red, slightly lighter colored below, 3.5 cm. in greatest diam., 4 cm. long, (obovoid), slightly pointed at base; areoles distant 4 mm. to 2 cm., round, bearing grayish wool and ^{3 to 11} gray spines with dark points, the spines 4 mm. to 11.5 mm. long, the 2 or 3 centrals being longer; the dried corolla remaining attached. See photo, and pickled specimen.

(Dr. Rathbun saw this and was much pleased with it. Miss Young asked to show it to him.)

9-1-15 /over

10-2-15.

Fruit pulp a brilliant red, rather stringy,
decidedly pleasant to taste, juicy as a
watermelon, ~~readily~~ ^[or dissolving?] and separating, nearly
as readily in the mouth; seeds, ^{shiny} black,
of irregular shape, about 3.5 mm. long,
2 mm. in greatest thickness, pointed at one
end, obtuse at other, ^{entire surface} finely pitted.

9 - 1 - 15

Mrs. McCleere re-
ports that Mr. Coville's
No. 1629 is *Severinia*
turrelii, collected
in Death Valley,
Nevada.

W. R. J.

11.147 *Mamillaria multiceps* Salm.

Plant in flower and fruit April 9, 1912; caespitose, many stemmed, each stem ovate shaped, from 1 cm. to 2.5 cm. in diameter; axils comparatively large and nearly free from wool; tubercles slender and nearly cylindrical; spines central, usually 5 to 7, 1 cm. or more long, white with brown tips; radials pubescent; flowers sessile, corolla tubular, projecting about 1 linear cm. beyond tubercles; petals 12, lanceolate acute, creamy white with lavender stripes at centers; stamens numerous; anthers light yellow; pistil exsert beyond stamens; stigma lobes greenish yellow; fruit bright red, carrot ~~xxxxxxx~~ shaped; seeds black.

Fitch

11. 173.

L. Busscalioni, Italy.

Cleistocactus colubrinus

Flower 6.7 cm. long, 7 to 11 mm. in diam., strongly curved just above ovary, with slight backward gradual curve to upper part, pale vermilion colored, bearing in clock-wise spirals short closely appressed bracts having long whitish wool in their axils; petals of same color as tube, except lighter inside, not spreading, inner ones obtuse, outer ones apiculate; stamens and style slightly exsert, the stamens nearly white at base, grading to pink and reddish; anthers small, light purple madder colored; fastened to tube in ring at top and from bottom of narrow throat upwards 1 cm. style pale yellow, not so much exsert as stamens, about .5 mm. in diam.; stigma lobes 8, linear, 4 mm. long; tube proper 1 cm. long, 3 mm. in diam., slightly curved; ovary globose, 4.5 mm. deep.

7-10-15.

11
218

6-18-12 6-14¹²

11.218

17 mm ~ 9 mm
6 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Pereskia Bleo.

11.238

C. R. Orcutt, San Diego,
Calif.

Lemaireocereus

Cereus cochal

Flower 2.8 cm. long, green, dark green at ovary;
ovary obovate shaped, ~~o~~ bractless; sepals elliptical
to ~~o~~ oblong; petals light green, oblong-elliptical;
throat funnelform; stamens numerous, attached
all over throat; filaments light colored; anthers
dull white; style not quite so long as longer
stamens, light green, 1.4 cm. long, 1 mm. in diam.;
stigma lobes 5, almost colorless.

11.269 Mamillaria elegans

(3-1-12)

Flowering March 23, 1912.

Plant ^{7.5 cm.} ~~8 inches~~ high, ^{7.5 cm.} ~~8 inches~~ in diameter; ^{tubercles} ~~mammæ~~ fairly well covered by spines; radial spines 24, appressed, somewhat pectinate, white, weak, and short; centrals ^{none} ~~lacking~~ or ~~present~~ 1 to 2, stouter, longer, outer 2/3 of spines reddish brown, inner part whitish, when two, divergent 30° or 40°; axils full of wool at top, while at sides wool unevenly distributed, sometimes absent; top center depressed deeply and protected by heavy growth of central spines; flowers in circle of about ^{10 cm} ~~8 inches~~ diameter around top, sessile; petals about 18, sub-lanceolate, light purple; stamens numerous; anthers light yellow; pistil much longer than stamens; stigma lobes whitish.

Collected by Wm. Brockway Oct. 24, 1911, on the Pedregal, between Contreras and Tlalpam, Mexico.

Fitch

11.273

Dr. A. Alfaro,
Costa Rica.

Epiphyllum lepidocarpum.

Flower ^{somewhat curved} 7 mm. to 1 cm. in diam. the
6.8 cm. long, tubular, petals not spreading;
no dividing line perceptible on outside indicating end of
calyx tube, ~~somewhat curved~~, the tube and sepals and petals being scarlet,
although darker at top; areoles bearing a little fine
whitish wool; ~~stamens~~ stamens silken white, scarlet
above, attached in ring at ~~top of calyx~~ base of
corolla, and in another ^{wider} ring or ~~to~~ band at bottom
of tubular throat, making an interval of 1.5 to 2 cm.
between; anthers Vandyke to acajou red; style
light yellow, stigma lobes yellow, 7, short, fine;
stamens and style exert beyond petals, the stamens
about 1 cm., the style not so far; ovary ellipsoid, 4.5
mm. long; tube proper tubular, 8 mm. long, 3 mm. in diam.
8-12-14.

11. 4 30.

Mamillaria plumosa

Arthur Kuester.
Not known whence obtained.

Welter, Dict. Hort.

Bois 804. 1898.

TYPE LOCALITY: In northern Mexico.

DISTRIBUTION:

ILLUSTRATION:

Flower nearly 18 mm. long, deeply sessile, protruding beyond stiff, dense, grayish wool 5 to 6 mm. ^{The tube} 5 mm. in diam., light green; petals and sepals seem to intergrade, the latter being lighter colored, but purplish ^{on outside of} ~~at~~ tips, both being lanceolate to elliptical; style and stamens (over)

included, the style exsert beyond stamens 3 mm.,
very slender, yellowish; filaments 6 mm. long,
attached all over short, funnelform throat; anthers
small, spherical, yellow.

12-12-14.

11. 1872

J. N. Rose.

Espirito Santo Isl.
Pt. Sgo. Calif.
~~Pacheco, Cal.~~
Apr. 1911.

Opuntia

Flower ^{7 cm. long,} spreading 5 cm. wide; calyx tube funnelform, 3.5 cm. long, 2.5 cm. and less in diam., bluish green, having numerous areoles on upper two-thirds, filled with short brown glochids, the upper areoles subtended by short, thick, pointed bracts varying from red to dull green; petals dark red, 1 cm. and less wide, mucronately tipped, lengthening into ~~ob~~ and grading into oblanceolate, mucronately tipped petals bright yellow with reddish ^{top} ~~purplish~~ tinge running down from tips; throat wide and short, the entire surface covered with stamens, these golden yellow, 14 mm. long, with lighter colored anthers; style 2.3 cm. long, 6 mm. and less in diam., greenish white; over.

stigma lobes exert beyond stamens, about 20,
creamy white; ovary funnelform, 7 mm. long,
surrounded by ^{juicy} thick walls ~~of juicy~~ of
pale greenish color.

5 - 13 - 15.

W.R.F.

12.49.

Mrs. T. D. A. Cokerell

Quirigua, Guatemala.

Hylocereus minutiflorus

(See cards, and record made in 1914.)

12490 - ~~Britton's~~ No. ?
N. Y. B. G.

Mac Dougal, 1902.

Rathbunia - ?

See description on cards. Flower 6 cm. long.
Stigma lobes 6, creamy white, exserted beyond stamens;
stamens numerous, exserted beyond reflexed petals;
anthers burnt lake color; filaments pinkish,
attached along upper $\frac{2}{3}$ of ~~throat~~ tube; style
nearly 5 cm. long, ^{1 mm. in diam.} same color as filaments; ovary
obovoid, 6 mm. long: petals scarlet, sepals
slightly darker: tube 8 mm. to 11 mm. in diam.

12490. MyBG no

Rathbunia?

~~about~~ spherical,

Fruit, 3.7 cm. in diam., spectrum red [R],
the flower stem, 3.8 cm. long, still attached;
areoles distant 1 to 2 cm., at times bearing 6 or 8
small spreading gray spines, and a little wool;
pulp slightly brighter than the ~~wood~~ skin, composed
of gnarled and broken candied strings 1.5 mm. in diam.,
1 cm. and more long, ~~seeds~~ rather pleasing to
taste: seeds black, irregular in size and shape,
~~about~~ 2.5 to 3 mm. long.

8-29-14.

TYPE LOCALITY:

DISTRIBUTION:

ILLUSTRATION:

12.53

Opuntia fuscoatra



Flowering May 6, 1912; joints obovate, 5 to 8 cm. long; areoles 1 to 2 cm. apart, entirely filled with dark brown glochids save for, on few areoles, one or two spines 2 mm. to 1.5 cm. long; flower 9 cm. in diameter; petals spatulate, 4.5 cm. long, 3.5 cm. wide at widest part, red at base, streaking into sulphur yellow with light yellow margins; stamens of varying lengths; filaments bright yellow; anthers slightly lighter colored; pistil slightly longer than stamens; stigma lobes 6, light pale green; ovary cylindrical, 1.5 cm. long, 3 mm. in diameter; throat wide, 5 mm. long.

Collected Mar. 4, 1912, by J. D. Mitchell, near Victoria, Texas.

* New joints bearing, on areoles, small worm-like leaves, one to each areole, which soon give place to glochids.

Fitch.

(?)

12.83

Echinocereus viridiflorus

Flowering May 20, 1912; plant dark sage green, slightly lighter below, 3.5 cm. high, 3.5 cm. in diameter, tapering slightly to truncate top; ribs 12, low, curving slightly to the right, slightly tubercled; areoles elliptical, 2.5 mm. long, bearing spines, radial, 17 to 20, 4 to 5 mm. long, slightly pectinate, of various colors, Indian red as given in Winsor and Newton's Water Colors, near horn color, and dirty white, and those at top center, Magenta as given in Winsor and Newton's Artists' Oil Colors; only few areoles bearing one central spine each, dirty gray with brownish tips, slightly stouter than radials, 10 to 12 mm. long; flowers growing from a slightly enlarged circular ring just above the ground; flower 2.5 cm. long; calyx tube 6 to 10 mm. in diameter, 1 cm. long, lower part dark malachite green as given in Winsor and Newton's Artists' Oil Colors, becoming lighter until ^{inner} sepals and petals being alizarin green as in Winsor *Fitch*.

2

outer sepals slightly darker
and Newton's Water Colors; calyx tube having areoles bearing white, flexible spines, 10 to 16, 4 mm. long; areoles on upper part bearing small bracts slightly darker than tube, and tipped with red; petals and sepals about same length, 12 to 14 mm. long, 3 mm. wide, linear; ovary 2.5 mm. in diameter, 3 mm. deep; throat 8 mm. long, 7 mm. wide at top, 1.5 mm. wide at base; stamens numerous; filaments white, some tinged with green, slender, 5 to 7 mm. long; anthers pale yellow; style 1.4 cm. long, white, upper part greenish white; stigma lobes 6, short, same color as petals.

Collected by F. W. Homan near Colorado Springs, Colorado, where they are known as the pin cushion cactus, and sent here in April, 1912.

12.78 Echinocereus rupestris ?

Flowered April 14 in Texas and still in flower when received, the 19th; caespitose, stems varying greatly in size, according to age, etc., one stem 2 dm. high by 7.5 cm. in diameter; ribs 7, ~~separated by deep sinuses~~ ^{shallow furrows} strongly tubercled, separated by wide ~~sinus~~; areoles bearing no wool except on newer tubercles and then very little, dark gray in color; flower 5 cm. long; bracts and many sepals bearing white spines with dark brown tips; petals about 12, about 2.5 cm. long, changing greatly from whitish at base to dark red at tips, obovate; stamens exceedingly numerous, closely clustered around pistil; ^{about 2.5 cm. long} filaments white at base to reddish purple near anthers; anthers bearing abundance of pollen, burnt umber in color; stigma lobes 9, about even with stamens, light green; tube proper 5 mm. long; throat about 1 cm. long; filaments attached to throat its full length, silken white with light purple tips; ovary obovate, circular; anthers

Fitch.

brown to dark brown with numerous golden beads of pollen; ~~stamens and pistil about same length, about 2.5 cm. long.~~

Collected by B. Mackensen in ^{April,} 1912, near Kerrville, Texas.

12.100

Mamillaria

Plant globular, 3.5 cm. high, 4.7 cm. in diameter, slightly flattened; axils naked, wide; tubercles about 7 mm. high, light oxide of chromium according to Winsor and Newton's Water Colors, becoming flattened at bases shortly below top, bearing areoles circular to elliptical, 2 to 3 mm. in diameter or in length; areoles bearing spines, centrals 3 to 5, usually 4, 13 mm. long and less, varying in color from light yellow to medium drab with brown to dark brown tops or sometimes for nearly outer two-thirds; radials about 20, whitish, slightly pectinate, 1 cm. long and less, weaker than centrals; flowers sessile, growing in small circle around top of plant, 2 cm. long;; calyx tube light green, short, 5 mm. in diameter at base, widening slightly; sepals oblanceolate, 1 cm. long, very light purple with creamy white margins; ovary globular, 2 mm. in diameter; throat 5 mm. deep, 5.5 mm. wide at top; stamens numerous, attached full length of throat;

Fitch.

filaments light greenish yellow; anthers rich yellow; style same length as stamens and color; stigma lobes 5, greenish yellow, small.

Collected by C. Birdseye May 22, 1912, near Jefferson, Colorado.

Echinocactus cataphractus

12. 129.

Watch out for flower of this,
and fruit, this summer.
Make descriptions.

12,49

Mrs. J D A Cockerell

Hylocereus minutiflorus

Quirigua,
Guatemala

See description on cards.

Ovary globose, 4 mm. in diam: style
12 mm. long 1.5 mm. in diam., white; stigma
lobes linear, 12, whitish, ^{numerous,} stamens, arising
from all over wide shallow throat, white;
anthers lemon yellow

12. 14

~~Opuntia catacantha~~

12. 142.

J. N. Rose.

Kew, Engl.

Heliocereus amecaensis

Stem pale green, strongly ^{and 4-} 3-angled; areoles distant 12 mm. and less, round, 3.5 mm. in diam., bearing short gray wool interspersed with 9 to 12 yellowish brown spines 11 mm. long and less, and 2 or 3 darker colored downward pointed bristles; [flower 11 cm. long, opening to ^{to 8 cm.} 8 cm. in diam.; ^{flower} calyx tube 3.5 cm. long, 1 cm. in diam., green, with green ^{seals} bracts, and whitish bristles; ^{outer bracts 2-4 mm.} ~~sepal~~ yellowish green, grading into oblanceolate white ^{inner papery} petals, 7 cm. long, 2 cm. wide; stamens white save the pale green bases, attached all over tube; anthers creamy white; style white, slightly exsert beyond stamens, strongly curved down in ~~calyx~~ ^{the} tube; stigmal lobes 11, linear, light creamy white; ovary cylindrical, 6 mm. long.]

12. 200.

W. Mundt.

Germany.

Echinocereus subinermis

Flower 7.8 cm. long, including ovary, spreading to about 5.6 cm. in diam; ovary shiny green, roughened by many areoles bearing short whitish wool and 8 to 9 white and brown bristle-like spines 2 to 6 cm. long; tube ^{fleeted, light green,} above ovary, ^{rapidly} enlarging, the corolla completing the funnel; areoles at top of tube subtended by red-tipped bracts, these grading into oblanceolate, bright yellow, petals (sepals wanting), the outer ones with reddish stripes down center and red tips; filaments about 1.2 cm. long, pale yellow, numerous, attached all over surface of broad funnelform throat; anthers orange colored; style 3.5 cm. long including stigma, bright
7 - 6 - 15 Over

green, exsert 1 cm. beyond stamens; stigma
lobes 7, dark green, 6 mm. long, thick for size
of flower, spreading; ovary ellipsoid, 9 mm.
long, 4 mm. in diam.

Compare with 10, 11, 3.

12. 226

Mrs. Irene Vera, #3.
San Luis Potosi, Mexico.

Mamillaria decipiens

See description of 05.896 on cards.

Filaments dull white, glistening, about 5 mm. long; anthers pale yellow; style exsert beyond stamens 3 to 4 mm, same color as filaments; stigma lobes 5, 1.5 mm. long, yellowish white with greenish tinge.

10-7-14.

12.398

Rhipsalis cassytha

S P Verner

Bas Obispo, Canal Zone

Same as

09.254 which see.

12.408

Cult. at Erfurt, Germany.

Selenicereus Vaupelii

Flower 26 cm. long, slightly curved; ovary green, ~~well~~ strongly tuberculate; calyx tube pale yellowish green, the sepals more nearly green; petals white; bracts reddish on lower part of stem and ovary, to pale green with reddish tips at top, where longer (2 cm long); filaments pale green, attached in ring at top and all over lower $\frac{2}{3}$ of tube; anthers bright yellow; style light green, ^{at base} to creamy yellow at top; stigma lobes about 20, pale lemon yellow; ovary obovoid, 1 cm. long.

13. 10 Cactus Lemnaisii

J. Fuentes,
Barahona,
Sta Domingo.

Fruit bright red, Terete, 3.2 cm. long
and less, 7 mm. in greatest diam.; dried perianth
attached; pulp whitish, juicy; seeds black,
1.3 mm. long.

13. 108

French Gilman

(No. of Gila R., Sacaton
Indian Agency.)

Opuntia spinosior.

Fruit 4 cm. long, 2.8 cm. in greatest diam., somewhat ~~not~~ smaller at base, truncate at top, the top depressed 8 cm. at center with funnelform walls; fruit when taken probably past maturity, somewhat soft, of pale dull yellow to pale dull brown, roughly tuberculate; areoles ^{distant about 1 cm. from each other} at tops of tubercles, flattened vertically, about 4 mm. long, 2 mm. in greatest width, ^{short} bearing dirty yellow glochids; pulp translucent, with yellowish tinge, especially near edge ~~part~~, not ~~a~~ very juicy, rather insipid
(over)

to taste; seeds 9, yellowish brown,
flattened, circular, 4.5 mm. in diam.,
2.5 mm. thick, with a light brown rim;
the walls of the seed about .3 mm. thick
tough and hard; inner part white and
gray.

13. 108.

Mr. French Gilman
Sacaton, Arizona.

Opuntia spinosior

See photo and formalin material
of fruits and specimen.

9 - 2 - 15.

13. 138.

N. L. Britton #1851.

NYBG No. 37242.

Leptocereus quadricostatus

Flower 4.5 cm. long, scarcely spreading at all (2 cm. in diam.), ~~the~~ the petals being almost entirely inserted ~~into~~ into walls of embryo fruit; areoles nearly to top part of flower, brown, at tops of slightly raised rib-like ~~en~~ enlargements, bearing 7 to 10 brown or white or white and brown spines about 5 mm. long; ^{few,} sepals, scarcely distinct from petals, of same color; petals whitish-tinged with green, spatulate; stamens and style inserted about 5 mm.; filaments slightly lighter colored than petals, numerous, attached along walls of upper half of throat; lower half enlarged into an ovoid chamber, ^{8 mm. long.} empty save for style. style pale green, 2 cm. long, 1 mm. in diam., stigma lobes 8, 6 mm. long, ^{creamy} white.

7-27-14

13.138

Dr. N I B

Porto Rico.

(37242)

Leptocereus quadricostatus

(See description of this number of
last year.)

7 - 1 - 15. ~~Jan~~ - 30 - 15

13.139

N. L. Britton #7600.

NYBG. 32905.

Harrisia eriophora Mariel, Cuba. 1913.

Flower ¹⁷~~15.5~~ cm. long; stem ¹⁰~~8.5~~ cm. long, ⁷~~6~~ mm. to ~~17~~
^{1.9}~~1.7~~ cm. in diam., green, fluted, ^{having} areoles bearing white
 wool almost enclosed by the bracts; bracts grading
 into the sepals; sepals ~~of~~ Indian red, greenish at
 base, linear ~~obovate~~ apiculate; petals oblanceolate,
 mucronately tipped, outer ones ¹⁵ pink, inner ones creamy
 white; style light green, ~~13.5~~ cm. long, about 1 mm. ~~long~~
 in diam.; stigma lobes 14, lemon yellow, 4 mm. long;
 filaments creamy white, numerous, attached along
 throat nearly to bottom of tube; anthers small, ~~pale~~
 light cream colored; ovary obovoid, ^{7.5}~~6.5~~ mm. long,
 filled with ovules.

6-30-14.

13,268

Rhipsalis Pittieri

See card index;

13. 270

Pereskia

H. Pittier

6480

Maiquetia, near La Guayra,
Venezuela.

Calyx tube, including corolla, 1.5 cm. long,
7 mm. in diam. at top, turgid, shiny green, bearing a
few bracts about 3 mm. long; petals obovate,
1 cm. wide and less, 1.5 cm. long and less, ^{near} light
magenta colored; The sepals scarcely evident,
lighter colored than petals; filaments numerous,
very fine, white; anthers bright yellow; style
whitish, tinged with purple at top, 8 mm. long,
1 mm. in diam.; stigma lobes 5, short, forming together
an ~~club~~ enlarged tip for style.

9-30-14.

13. 270.

Pereski

H. Pittier

Near La Guayra, Miquetia
Venezuela.

[See description of last year.]

13. 279

H. Pittier

Venezuela.

Mamillaria

(Is this *M. simplex*? wr. J.)

Flower deeply sessile, surrounded by white wool at base, whitish, 1 cm. long, with a spread of about 6 mm.; petals narrow acuminate; filaments nearly white, weak; anthers creamy white; style pale greenish yellow; stigma lobes 5 greasy yellow

13.279

H. Pittier

Between El Higraz and Cabo Blanco.

Venezuela.

Mamillaria [simplex ?]

Fruit crimson lake (Winson & Newton),
~~flat~~ broad at top, flattened, about 1.2 cm. long, 8
mm. wide at top and 4 mm. thick, becoming at base
narrower and thinner, the dried ~~co~~ fragment
of the corolla remaining at the top: seeds a greasy
yellowish brown, 1.3 mm. long, ovoid, fairly
numerous; pulp red, juicy.

13.296.

L. N. Goodding (1427)
Mule Mts., Ariz.
Cylindropuntia

Opuntia

Fruit red, ovoid, 14 mm. long, 1 cm. in largest diam., ~~bearing~~ ^{with} numerous small round areoles; areoles ~~having~~ filled with very short, light gray ~~wool~~ wool and bearing a few short brown glochids pointing outward and upward; seeds almost entirely filling fruit, to exclusion of pulp, somewhat flat, quite irregular in shape, light colored.

13, 323.

H. Pittier
#6443.

~~Puerto~~ Cabello, Venezuela.
around El Palito.

Lemaireocereus

7-2-13.

Flower light malachite green, 21 cm. long; stem 17 cm. long, 8 mm. to 3 cm. in diam.; areoles ^{on protuberances 2 to 3 mm. long,} numerous at base, ^{lower ones} 4 to 5 cm. distant at top, occasionally ^{dark brown,} bearing a spine each, sometimes 2, the upper ones bearing small, mucronately tipped bracts which at top of stem grade into sepals; spines $\varnothing$ 7 mm. ^{or} less long, dull white, weak; sepals lanceolate to oblanceolate, narrow, apiculate, same color as stem except darker at upper part; petals same shape as sepals, and length, 4 cm. long, white with purplish tips; style white, 17 cm. long, 2 mm. and less in diam.; stigma lobes 10, linear, 1.5 cm. long, cream colored; stamens attached along upper half of stem; ^{about half of them inserted beyond style & petals,} filaments white; anthers light yellow.

7-28-14.

13. 408

E. C. Wuxlow, Houma, La.

Hymenocallis galvestonensis Baker

13. 454

H. Pittier?

Venezuela?

Rhipsalis

[Is this same as *R. Pittieri*, 13.268?] globular, 5 mm. in diam., and less

Fruits, deeply imbedded in stem, and protected by slight growth of whitish wool around the base, ~~globular~~, with translucent whitish skin, and retaining in tuft at top the dried remnant of ~~the~~ corolla; pulp a very juicy, colorless, ^{nearly tasteless,} mass; seeds black to dark reddish brown, ~~of no~~ about 1 mm. long and more or less pointed at ends, somewhat flattened, about half as wide as long.

8-9-15.

13. 916

Rose & Fitch Sierra Blanca,
Texas.*Echinocereus stramineus*

Flower 9 cm. long, opening to about 7 cm. wide; calyx tube about 4 cm. long, 1.7 to 3 cm. in diam., green at base to purplish bronze at top; areoles bearing 3 to 8 white, weak spines, up to 2 cm. long; bracts of nearly same color as tube but brown at tip, grading into broad, short, obtuse sepals; of much same color; petals broadly spatulate, cobalt violet [Winsor & Newton Artists' Oil colors], tending to split at the ends; ^{stamens 8 mm. long} ~~anthers~~ very numerous, very pale green, ~~the~~ covering broad funnelform throat; anthers bright golden yellow; style, including stigma, 3.8 cm. long, 3 mm. in diam., creamy white; stigma lobes 10, rich green, 7 mm. long; ~~ovary~~ cylindrical, 1.3 cm. long, 7 mm. in diam., the ovules not filling the cavity.

13. 10 36.

Rose & Fitch,

Texas.

Dr. Rose took this earlier.

5-27-15.

13.1058.

J. N. Rose.

Laredo, Texas.

Manfreda maculosa Hook.

13. 3362.

Rose, Fitch, & Russell.

Near All Souls,
Antigua

Epiphyllum. Flower, including tube and ovary ^{2-18-13.} 28 cm. long, the tube slender, 4 to 7 mm. in diam.; ~~stem~~ ^{tube} pinkish, lighter colored at tip and base, bearing reddish bracts at widening intervals; ovary rich green, bearing numerous short, reddish bracts ^{from elongated protuberances}; ~~sepal~~ ^{sepal} green, scale-like, elongate, 2.5 cm. long and less; petals white, broadly elliptical, apiculate; style slightly larger than 1 mm. in diam., magenta colored; stigma lobes 4 mm. long, yellowish; filaments white; anthers dark brown, 2 mm. long, flat; ovary 1 cm. long, cylindrical.

11-17-14.

~~07. 229~~ 13. 3866

~~Dr. Pittier~~ Rose, Fitch & Russell
Santo Domingo.

Mamillaria prolifera.
~~*Rhipsalis ramulosa*~~

Fruit 1.4 cm. long, 4 mm. in greatest diam.,
somewhat terete, somewhat pointed ~~towards~~ at
base, ^{somewhat curved} carmine, having a tuft at top from
the dried part of corolla remaining; pulp red,
juicy, slightly sweetish; seeds 2 or 3 to each
fruit, ^{black, pitted,} slightly flattened, the side somewhat ovate.

14. 33.

L. Suehl. Germany.

Pfeiffera ianthothela

Fruit, ^{1.1 cm. in diam.}, same for the whitish, protruding areoles bearing 4 to 6 weak white bristles 2 to 6 mm. long, strongly resembling a gooseberry; drying corolla still attached; the black irregular, ^{fish-shaped} seeds of about 1.5 mm. length, encased in a juicy jelly-like colorless mass, ~~and~~ ^{which} filling out the fruit; making it plump.

14. 62.

N. L. B. 1600. Cuban.

(N. Y. B. G. 32905).

Harrisia eriophora

(See B. 139 and my description thereof on 6-30-14, from same N. Y. B. G. no.)

Flower (closed) 21 cm. long; bracts obtuse, yellowish green at base of tube, changing to bright green and at top of tube grading into reddish tinged sepals; areoles forming a ball-like enlargement around ovary, bearing scant amount of whitish wool; petals white[ⓧ], serrate; filaments very pale green, attached in ring at top of tube and then from about 2 cm. below to within 3 cm. of bottom of tube; anthers creamy yellow; style green, 18 cm. long including stigma lobes, these linear, pale lemon yellow, numerous

ⓧ outer sides of outer sepals tinged with purple.

6-29-14.

14. 64

Dr. N. L. Britton

Harrisia portoricensis

Porto Rico.

See description of species in Britton, Bull.
Torr. Club 35; 563. 1908.

Flower 16.2 cm. long, pale green, green at
base, paler at top becoming almost tawny
colored ("hardly pinkish"); areoles bearing
very slight amount of wool, the most being
at top and bottom; ovary enlarged, the
outside diam. being 2 cm., the calyx tube
above being only about 1 cm. in diam. Stamens
white with slight greenish tinge, attached in
ring at top of tube and from 2.5 cm. below to
7-26-15 (over)

within 3.2 cm. of bottom of tube; anthers 3 mm.
long and less, flattened, cream colored; style
green, paler above, when flower is closed but
slightly included, and but very slightly exsert
beyond stamens: stigma lobes 16, linear, 7 mm.
long, pale yellowish green; ovary pear-
shaped, 8 mm. deep, filled with whitish
ovules.

14. 70.

John T. Sinclair,
(NYBG #39463).

Santa Marta, Colombia.

Cactus

Flower deeply sessile in the cap, 2.8 cm. long, 4 mm. and less in diam., the imbedded part white and incased by a white wool which, though wrapped around the flower, doubtless grows from the cap itself; petals madder carmine (Winsor & Newton Artists' Oil colours); style white, pinkish white at top with stigma of same color; filaments seemingly wanting; and in place of anthers there seems to be a mass of yellowish matter to take their place in the flower growth; ovar cylindrical, 4 mm. deep, 2 mm. in diam.

7-19-15.

14. 117

R. Lamb. Manchester,
Engl.

Rhipsalis foveolata

Poor specimen of flower.

Petals yellowish white, 9 mm. long and less,
elliptical; filaments sandy, outer ones ^{slightly} tinged
with purple, ^{3 to 5 cm. long}; style greenish white, exsert
beyond stamens; stigma lobes linear, 2 mm.
long, about 6.

About 5 - 20 - 15.

14. 129.

R. Lamb (#895).

Rhipsalis neves-Armondii

Flower deeply sessile; calyx tube, including ovary, 5 mm. long, 4 mm. and less in diam.; base of ovary surrounded by a scanty covering of ~~very~~ short white wool which hardly protrudes from stem of plant when flower is mature; sepals and petals scarcely distinguishable, silky white, lanceolate ~~about~~ 12 mm. long and less, spreading almost horizontally except turned down at tips; filaments numerous, very delicate attached all over wide, nearly flat Throat, 8 mm. and less long, reddish yellow at base, very light yellow above; anthers very small, light yellow; style slightly exsert beyond stamens greenish white, about $\frac{1}{2}$ mm. in diam; stigma lobes 5, spreading, about 2 mm. long, same color as style.

11 - 10 - 14.

14. 173

Miss M. E. Chaffey, #1.
El Paso, Texas.

Mamillaria micromeris /?

Fruit crimson, lighter at pointed base, terete, slightly curved, about 14 mm. long, 3 mm in greatest diam., near the top. Seeds nearly black, small, 1.5 mm. long or less, angular, having a circular depression on one side, and on another drawn out to a point.

14,850.

J. N. Rose.

Tephrosanthus aphylla Rusby

Below La Paz,
Bolivia.

14,850?

J. N. Rose. Below La Paz,
Bolivia.

Tephrosia aphylla Rusby

Flowers white.

8-26-45.

14. 13 25.

J. N. Rose.

Barros Luco, Copiapo,
Chile.

(Seeds - 10 - 13 - 14)

7-19-15.

15. 10.

Stapelia

Mrs. J. H. Chiles,
Palm Beach, Fla.
Cult.

9-22-15.

15. 15

H. L. Shantz.

Arizona

Mamillaria Grahamii

[See descriptions on cards]

Petals rose madder (Winsor & Newton),
the margins thinner and lighter colored,
oblanccolate, acuminate; anthers aurora
yellow; stigma exsert 6 mm. beyond
stamens.

15. 15.

H. L. Shantz.

Mammillaria Grahami

Chandler, Ariz.

Fruit (see description on cards).

7-13-15.

15.43.

B. R. Russell, San Saba,
Texas.
Echinocereus pectinatus texensis?

Flower 7.8 cm. long, opening to about 4 cm. diam;
calyx tube ^{including ovary} 4 cm. long, 11 mm. in diam., ~~at least~~, ^{to 2.5 cm.}
the ovary almost hidden by the ~~protruding~~ areoles filled with
white wool and white and brown ~~spines~~ bristles;
ovary green; calyx tube red tinged with purple;
sepals oblanceolate, purplish with brown
stripe down center; petals, purple, oblanceolate
apiculate; stamens ^{about 1 cm. long}, bright yellow, numerous,
attached full length of deep funnelform throat;
anthers light yellow; style white, 3 mm. in diam,
cm. long to stigma lobes, These 14, linear, 5 mm. long,
green; ovary obovate, 7 mm. long.

Is this var. texensis?
See photo.

5-25-15.

15. #5.

J. N. Rose, Texas.

Echinocactus setispinus

Flower 5.4 cm. long, opening to about 4.5 cm. width; calyx tube green, bearing red-tipped short bracts broad at base; sepals changing from green to greenish yellow, with red tips; petals narrowly oblanceolate, apiculate, the inner ones without the red tips of bracts and sepals, bright yellow; stamens numerous, 12 mm. long, orange red, ^{covering the} funnelform throat; anthers very small, dirty yellow; style 3.2 cm. long including stigma, pale yellow; stigma lobes 9, spreading, about 5 mm. long, yellow; ovary obovoid, 5 mm. long.

6 - 1 - 15.

15. 51.

S. B. Tarish

Barstow, Calif.

Echinocactus polyancistrus

Flower tubular, 8.5 cm. long; corolla tube 1.7 cm in diam., cylindrical, tawny green, glaucous, bearing wide, short, reddish tipped bracts which grade into sepals and these into purplish violet spatulate, mucronately tipped petals 4 cm. long; stamens ^{very} numerous, bright green, attached all along funnelform throat, centering in dense mass around the style; anthers lemon yellow; style 4 cm. long, ^{finely fluted}, about 2 mm. in diam., including stigma exsert 1 cm. beyond stamens, light green below to pale lemon yellow above; stigma lobes about 10, chrome green No. 1 (Winsor & Newton's Colors, artist's oil) 4 to 5 mm. long; ovary cylindrical but slightly

smaller at lower end, 12 mm. long, 7 mm.
and less in diam.

5 - 10 - 15.

15.51.

S. B. Parish

Calif.

Echinocactus polyancistrus

Fruit 4.8 cm. long and less, 2.6 cm. in largest diam., ellipsoid, dark red, bearing a few distant areoles; areoles ~~areoles~~ white with short wool, subtended by a ^{short} whitish tufted bract; drying corolla firmly attached to fruit when ripe; wall of fruit 3 mm. thick, whitish inside; leaving a large cavity inside; seeds black, flattish, in profile snail-shaped or like a large comma thus [●]¹/₁ the hilum depressed marked with gray; interior white, surrounded by the black outer shell. [See packet of seeds]

15. 74

S. B. Farish

Near Seastalk, Calif.

Echinocereus

Fruit obovoid, 3 to 3.5 cm. long, 2.5 to 3 cm. in greatest diam., ~~yellowish~~ whitish yellow tinged with green ~~or pink~~ in places and with pink on upper surface; areoles numerous, distant about 1 cm., ^{round,} 3 mm. in diam., bearing 14 to 18 white spines with brown tips, ~~2~~ 2 to 12 mm. long, 4 to 5 of them being central and usually the longer ones; ^{dry} corolla still firmly attached to fruit at maturity, the lower part covered with spine bearing areoles; pulp pinkish white, very soft, sweet, agreeable to the taste, filled with the small black seeds; seeds

over

inclined to have 2 flattish sides, 1.5 mm.
long, rather coarsely and deeply porous
save around the smooth surfaced hilum.

15. 77

S. B. Parish

So. Calif.

Echinocactus cylindraceus?

Flower 4.7 cm. long, with spread of 4 cm. when open; calyx tube, including ovary, 1.5 cm. long, and 1.5 cm. in diam. at top, terete, bearing broad obtuse scale-like purplish Indian red bracts, the edges being thinner, turning to light green, with greenish pubescence; bracts grading into ^{lanceolate} sepals with greenish yellow to bright yellow margins; petals oblanceolate, lemon yellow, ruffled at tops, ranging from obtuse to having mucronate tips; stamens numerous, ^{pale lemon yellow,} covering the broad, nearly flat throat, closely massed around the exsert style; anthers primrose-aureolin; style and stigma.

2.2 cm. long, 7 mm. exsert beyond stamens,
3 mm. in diam., slightly lighter colored than
petals, dividing into stigma lobes nearly at
bottom of style: ~~the~~ stigma lobes 16, linear,
1.1 cm. long spreading slightly at top; ovary
cup shaped, the top truncate, only partly
filled with light cream colored ovules,
6.5 mm. deep, 6 mm. in diam.

15.95

Dr. O. F. Cook

Tinta, Peru.

"Ayrampo" Cactus.

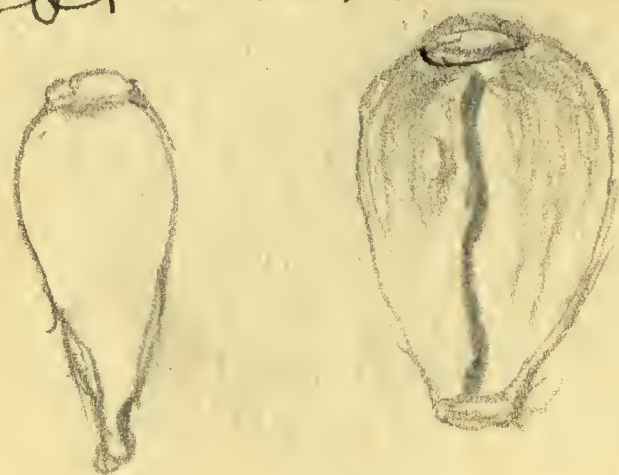
One dead terged joint.

9-28-15,

16. 116 Cactus

Turks Islands
Through N. Y. Aquarium

Below are outline sketches of fruit, natural size. Fruit turged, upper part carmine red, becoming lighter below to pale pinkish white; upper part showing a brownish hard scar left



by dying flowers corolla;

on one side of fruit is a sharp slightly waving in-

dentation ^{numerous} running from top to base; seeds ^{one or two brown} about 1 mm. in diameter, black, nearly round except pointed at one end, the surface finely ~~porous~~ indented.

10 - 9 - 16

14.109

R. Lamb

Cult. Manchester, Engl.

Rhipsalis chrysocarpa

See card.

14. 70.

Senclair

Santa Marta, Colombia.

Cactus

Fruit bright red, curved, 3.2 cm. long and less, 1 cm. and less in greatest diam., pointed at base; pulp whitish to nearly colorless; juicy; seeds black, ovoid, about 1.3 mm. long.

9 - 11 - 15.

14. 82

S. B. Parish, San Diego Co.,
Calif.

Phellosperma tetrancistra

Plant 8.5 cm. high, 9 cm. in diam., or excluding
spines, 7.5 cm. high, 5.2 cm. in diam., ^{ovate,} green
except for white and brown spines; tubercles in
spiral rows, turning to right, about 1 cm. distant,
and 1 cm. high; ~~areoles~~ round at top, flattening
near ground and widening; areoles bearing about
20 weak white appressed radial spines about 1
cm. long, and 1 to 3 centrals about 2 cm. long, reflexed
at tip, dark brown to almost black except white
just at base; flower appearing from about 1
1.5 cm. below top, deep seated, 5 cm. long; stem
2 cm. long, 4 to 12 mm. in diam., green at ovary;

sepals Indian red with whitish margins,
lanceolate; petals oblanceolate, purple lake;
style inserted, light green, 2.8 cm. long, 1 mm.
in diam.; stigma lobes 6, lemon yellow, short;
stamens much shorter than style, attached nearly
all over on wide shallow throat; filaments
white; anthers cadmium yellow; ovary small,
cylindrical.

7-9-14.